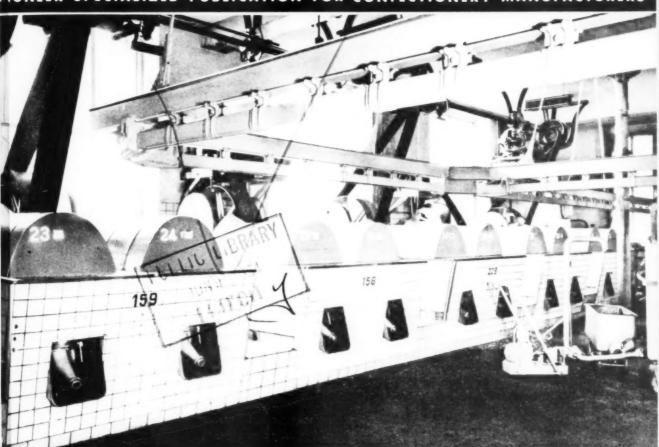


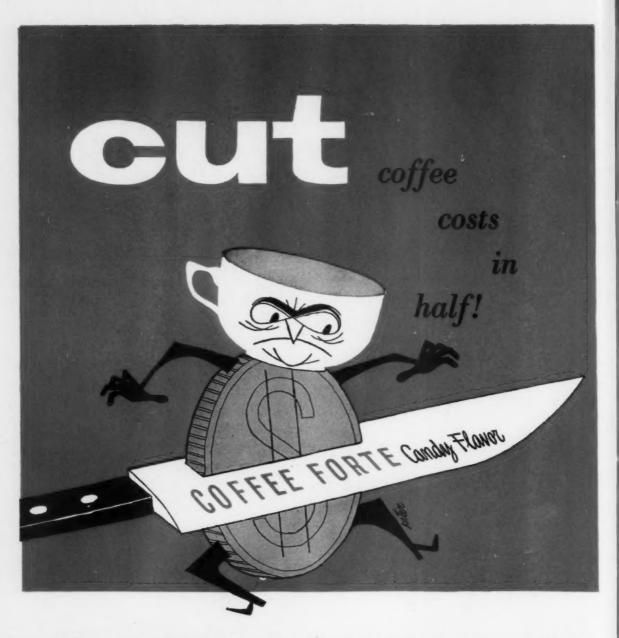


PIONEER SPECIALIZED PUBLICATION FOR CONFECTIONERY MANUFACTURERS



JUNE 1954

PMCA Production Conference Report NCA Convention Program and Exposition Plan



This headline is not just a trick claim to induce you to read further. It's a proved fact... proved day-in and day-out by candy manufacturers everywhere! COFFEE FORTE actually cuts coffee costs in half, yet gives candies a rich, cup-of-coffee aroma, as well as the full-bodied flavor that creates repeat sales! You save 50% because COFFEE FORTE is double-strength! You'd actually need twice as much pure dry instantly soluble coffee to build up the same degree of flavor. Yet COFFEE FORTE costs no more! Write, wire, phone ... we'll tell you all about it!

AMERICAN FOOD FLAVORS For Cream Centers & Hard Candies

VANILLA EXTRACTS
(Pure & Concentrated)
FRUIT FLAVORS
COFFEE FORTE

S

fo



MERICAN FOOD LABORATORIES, Inc.

860 Atlantic Avenue, Brooklyn 17, N. Y.

3968 NORTH MISSION ROAD, LOS ANGELES, CALIF. * PHILADELPHIA * BALTIMORE * DETROIT * CHICAGO * SAN FRANCISCO



Sugar Information Helps You—"The above facts," your Flo-Sweet Engineer points out, "are the main findings now being revealed by Sugar Information, Inc. In newspapers and magazines across the country, Sugar Information is showing how sweets can help control weight. The messages explain how foods containing sugar reduce the hunger that causes overeating and consequent overweight."

If you would like to reprint the above message, or to learn more about the work Sugar Information is doing to clear away the public misunderstandings about sugar, feel free to call upon your Flo-Sweet representative. He'll be glad to help you put this information to effective use.



Distributed from Yonkers • Pittsburgh • Toledo • Detroit

REFINED SYRUPS & SUGARS, Inc.

YONKERS, NEW YORK

SERVING INDUSTRIAL SUGAR USERS EXCLUSIVELY



Your Candies Need the Finest....



THERE'S no question about it, flavor is the ingredient that sells candy. Nor is there any question but what there is one best flavor for each type of candy made. To make that choice requires discriminating selection by the manufacturer from among many, many grades and brands of flavors offered. By relying upon the products of the most reputable manufacturers, the confectioner's problem of selection is greatly simplified, because the flavors offered by such suppliers represent the ultimate in flavor perfection based upon years and years of constant scientific study, experimentation and improvement. FRITZSCHE Flavors—in variety and type for every confectionery need—are, today, the result of over 80 years of applied experience. Thus, for the finest, come to FRITZSCHE... A FIRST NAME IN FLAVORS SINCE 1871.

FRITZSCHE ENA



PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES and °STOCKS: Atlanta, Georgia, Bostou, Massachusetts, °Chicago, Illinois, Cincinnati, Obio, Cleveland, Obio, *Los Angeles, California, Philadelphia, Pennsylvana, San Francisco, California, St. Louis, Missouri, "Toronto, Canada and "Mexico, D. F. FACTORY: Clifton, N. J.

The Manufacturing Manufacturing Confectioner

Vol. XXXIV

No. 6

JUNE

1954



Edited and Published in Chicago

The Candy Manufacturing Center of the World



N. C. A. Convention Program				
Proceedings of the PMCA Production Conference				
Milk Chocolate Technology-J. C. Musser				
What to Expect from a Corrugated Shipping Container -Charles H. Carpenter				
Antioxidants in Candy and Candy B. N. Stuckey	Packaging Materials			
N. C. A. Exposition Plan	56			
Directory of Exhibitors				
The Control of Gloss on Hard Butte	er Coatings-Justin J. Alikonis 76			
Studies on the Shelf-Life of Coconut Bars-H. B. Cosler				
The Handling and Delivery of Liqu				
-Warren L. Newcomer	89			
Candy Packaging 37	Candy Clinic 94			
Confectioners' Briefs 63	Calendar 97			
What's New in Candy	Brokers 98			
Packaging 68	Classified Ads 99			
Supply Field News 69	Advertisers' Index100			

COVER: This is a view of the conching room at Lindt & Sprungli, Switzerland. The stands for the conches are tiled in to allow thorough cleaning. A portable pump is shown which transfers chocolate from the conches to a tank which travels on an overhead monorail.

Founder-EARL R. ALLURED

Publisher—P. W. ALLURED Editor—STANLEY ALLURED
Eastern Manager—JAMES ALLURED Technical Editor—WESLEY CHILDS
Sales Manager—ALLEN ALLURED English Representative—M. G. READE

Publication Office 418 N. Austin Blvd. Oak Park, Illinois Eastern Office 303 W. 42nd St. New York 36, N. Y. London, England Prospect House Heath Street N.W.3

Published monthly except May, when published semi-monthly by The Manufacturing Confectioner Publishing Company, publishers of The Manufacturing Confectioner—The Blue Book—The Candy Buyer's Directory. Executive offices: 418 No. Austin Blvd., Oak Park, Illinois. Telephone EUclid 6-5099. Eastern offices: 303 West 24nd Street, New York City 36, N. Y. Telephone Circle 6-8468. Publication Offices: 401 N. College, Indianapolis, Indiana. Copyright, 1954. Prudence W. Allured. All rights reserved. Suscription price: One year \$3.00. Two years, \$5.00. Per copy, 35¢. "Purchasing Executive Issue"; 32.00. In ordering change of address, give both old and new address. Entered as Second Class Matter at Indianapolis, Indiana, under the Act of March 3, 1897. Member: National Confectioner's Assn., Western Confectionery Salesmen's Assn., National Candy Wholesaler's Assn., Audit Bureau of Circulation, Associated Business Publications. Foreign subscriptions: One year, \$4.00. Two years, \$7.00. Canadian Subscriptions: Same as U. S.

CANDY PRODUCTION:

Methods and Formulas

by Walter Richmond

Mr. Richmond describes fully the three basic operations for good candy manufacture: (1) Ingredients and Cooking Actions, (2) Mixing, Casting, Coating, Etc., (3) Trouble Shooting. Mr. Richmond tells both the reasons and the methods of operation. In addition, he provides carefully selected formulas for both the wholesale and the retail trade.

Whether you have a large plant or a small one, CANDY PRODUCTION: METHODS AND FORMULAS will prove a valuable asset to your firm. Mr. Richmond's book has 30 helpful chapters, as shown in the accompanying contents table. Its 640 pages contain 500 candy formulas and detailed production information on candies. For quick, convenient reference, a numbered list of the book's 500 formulas -grouped also under 32 main candy classifications-is provided. A comprehensive index and large diagrams showing both how to decorate Easter eggs and how to insert fruit and nuts in the centers are still additional features. Designed specifically as a production man's text, Mr. Richmond's helpful book also provides generous space alongside the formulas for notes during actual production in the candy plant.

Publishing Company
18 N. Austin Blvd., Oak Park, Ill.
Enclosed find my checkto cover he cost ofcopies of the Candy Production Methods and Formulas at \$10.00 ea.
Name Title
Firm

Address Zone ... State

Directory Division

saves you 26% to 31% on the and actually improves the taste

New laboratory studies now prove that you can reduce time, labor and ingredient costs, yet retain high quality and even improve flavor in caramels with White-Stokes SUPERKREME.

These tests were based on a standard, high quality caramel recipe made up in two batches; Batch A using a large percentage of 22% cream, and Batch B in which much of the expensive cream was replaced with low cost White-Stokes SUPERKREME. Specifications called for both batches to be cooked to 240° F., or to a 13% moisture content in the finished candy.

Time, labor and ingredient costs of both batches were carefully established and the finished caramels from each batch submitted to a large number of individual comparative taste tests.

The results are highly significant to candy manufacturers. For example, these are the savings shown in ingredient costs alone:

Batch A: Yield 31.4 lbs. Ingredient Cost \$10.94 Batch B: Yield 33.4 lbs. Ingredient Cost 7.98 **SAVING \$ 2.96**

Added savings in time and labor costs were shown for Batch B because it required less cooking time. In Batch A, 15.45 lbs. of moisture content had to be cooked out while Batch B needed the removal of only 8.00 lbs. of moisture.

Results of the individual taste tests indicated a majority preference in favor of the candy from Batch B made with White-Stokes SUPERKREME.

The table below gives the basic test data compiled from these laboratory studies:

ENT QUANTITY		PRICE*		MOISTURE CONTENT**		FAT CONTENT	
BATCH A	В	A	В	A	В	A	В
7 lb.	7 lb.	\$ 0.63	\$0.63				
10 lb.	10 lb.	0.67	0.67	2.00 lb.	2.00 lb.		
21/2 gal.	1 gal.	8.00	3.20	13.10 lb.	5.25 lb.	4.57 lb.	1.83 lb
1 #10 can	1 #10 can	0.87	0.87	4.38 lb.	4.38 lb.	0.69 lb.	0.69 lb
3 lb.	3 lb.	0.77	0.77			3.00 lb.	3.00 lb
	7 lb.		1.84		0.70 lb.		1.06 lb
46.85 lb.	41.4 lb.	\$10.94	\$7.98	19.48 lb.	12.33 lb.	8.26 lb.	6.58 lb
	7 lb. 10 lb. 2½ gal. 1 #10 can 3 lb.	A B 7 lb. 7 lb. 10 lb. 10 lb. 1 gal. 1 #10 can 3 lb. 7 lb. 7 lb.	A B A 7 lb. 7 lb. \$ 0.63 10 lb. 10 lb. 0.67 2½ gal. 1 gal. 8.00 1 #10 can 3 lb. 3 lb. 7 lb. 0.77 7 lb	A B A B 7 lb. 7 lb. \$ 0.63 \$0.63 10 lb. 10 lb. 0.67 0.67 2½ gal. 1 gal. 8.00 3.20 1 #10 can 3 lb. 3 lb. 0.77 0.77 7 lb 1.84	A B A B A 7 lb. 7 lb. \$ 0.63 \$0.63 \$ 10 lb. 10 lb. 0.67 0.67 2.00 lb. 2½ gal. 1 gal. 8.00 3.20 13.10 lb. 1 #10 can 3 lb. 3 lb. 0.77 0.87 4.38 lb 7 lb 1.84	A B A B A B 7 lb. 7 lb. \$ 0.63 \$0.63 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	A B A B A B A B A B A B A B A B A B A B

^{*}Figured at market prices as of March, 1954.

^{*}Calculated in accord with standard specifications for raw ingredients.

SUPERKREME

cost of the ingredients alone,

of high quality caramels

	CANDY	FAT CONTENT	TOTAL INGREDIENT COST	INGREDIENT COST PER LB. OF CANDY	SAVING IN COST PER LB.
BATCH A— Recipe as shown in chart on opposite page.	31.4 lbs.	8.26 lbs.	\$10.94	\$0.35	••••
BATCH B—Recipe with SUPER- KREME as shown in chart on opposite page.	33.4 lbs.	6.58 lbs.	\$ 7.98	\$0.24	\$0.11 (31%)
BATCH C—Recipe same as BATCH B but with 2 lbs. of butter @ 55¢ per lb. added for greater fat content.	35.4 lbs.	8.58 lbs.	\$ 9.08	\$0.26	\$0.09 (26%)

These laboratory studies also prove that where a higher fat content is desired, the use of White-Stokes SUPERKREME with added butter also provides substantial savings as shown in the chart above. Taste tests made with Batch C candy (with added butter) compared with Batch A showed an overwhelming preference for Batch C.

We are sure we can prove to you that you can effect these savings in your caramel making. Ask us to have a White-Stokes representative call—try the taste test with SUPERKREME-made caramels—let him explain in detail how you can use White-Stokes products advantageously. A note or call from you will start him on his way.



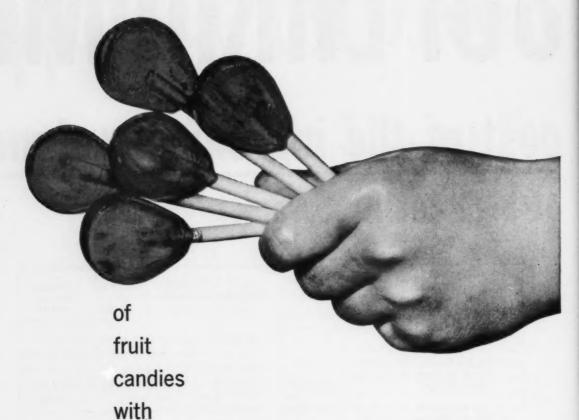
White Stokes

See us at Booth #5, N. C. A. Convention, June 6-10, at the CONRAD HILTON HOTEL, Chicago, Ill.

COMPANY

Factory: 3607 South Jasper Place, Chicago 9, Ill. . Eastern Warehouse: 360 Furman St., Brooklyn 2, N.Y.

Improve the flavor



PFIZER CITRIC ACID

• Pfizer Citric Acid is the acidulant that gives your fruit candies the tangy taste they need to stay on the "best seller" list. It is ideal for candy processing... is readily soluble and mixes easily with other ingredients.

Available in mesh sizes to suit your specific needs: granular, fine granular, fine granular xx and powder. Packed in 25, 50, 100, 200, and 220 lb. drums. Order Pfizer Citric Acid today.

Other Pfizer Products for the Candy Industry: Cream of Tartar, Tartaric Acid, Vitamins

CHAS. PFIZER & CO., INC.

CHEMICAL SALES DIVISION

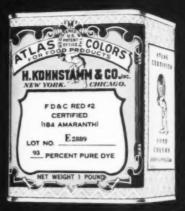
630 Flushing Ave., Brooklyn 6, N.Y. Branch Offices: Chicago, Ill.; San Francisco, Calif.; Vernen, Calif.; Atlanta, Ga.

Manufacturing Chemists for Over 100 Years





ATLAS CERTIFIED COLORS



Industry's standard for 103 years

FIRST PRODUCERS OF CERTIFIED COLOR



KOHNSTAMM & COMPANY Inc.

ESTABLISHED 1851

89 PARK PLACE, NEW YORK 7 • 11-13 E. ILLINOIS ST., CHICAGO 11 • 4735 DISTRICT BLVD., LOS ANGELES 11
BRANCHES IN OTHER PRINCIPAL CITIES OF THE U.S.A. AND THROUGHOUT THE WORLD

Quality Controlled

ALVA quality controlled flavors can be depended upon for uniform strength, stability, and taste. Each batch of flavor produced at the ALVA plant must meet the same rigid requirements, the same careful inspection and tests that assure not only good taste but consistently good performance.

Try this remarkable new

RASPBERRY STRAWBERRY CHERRY

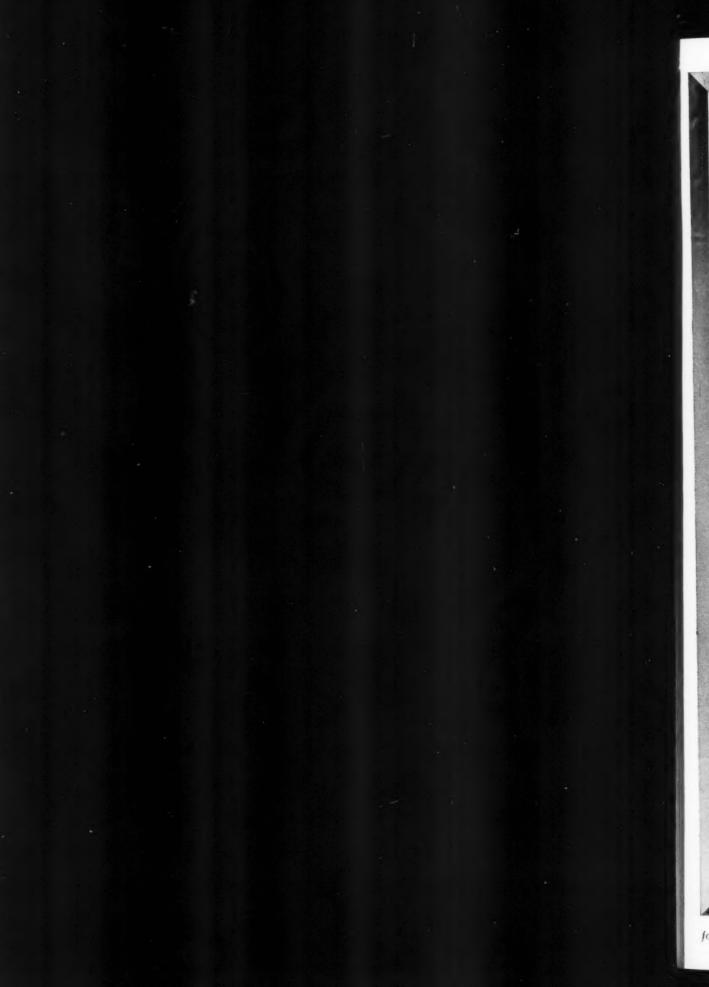
Developed for soft centers and for hard candies.



VAN AMERINGEN-HAEBLER, INC.

521 WEST 57th STREET, NEW YORK 19, N. Y.







The two top high speed rolls of this new Bauermeister Cocoa Liquor Mill are equipped with an automatic temperature control. An automatic regulator adjusts the flow of cocoa nibs into the disc mill to the proper amount the rolls can take. And a liquor feed arrangement, also automatic, between disc mill and refiner spreads the liquor evenly and prevents any separation of the cocoa butter. All these refinements result in an important labor saving. And when your cocoa liquor runs through the four vertical rolls, each equipped with efficient water cooling, you are sure of an evenly finished product-chocolate you'll be proud of. Send for catalog giving full information

GRINDING MILL has counter rotating slow speed centrifugal and grinding elements.

VERTICAL REFINER (4 rolls, water-cooled) of special chilled cast iron of uniform hardness and long life results in better and smoother crushing.

DELIVERY SCRAPER KNIFE

(patent pending) special design, allows the knife to be used to the end without re-sharpening or changing.

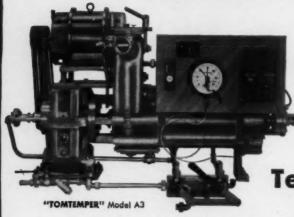
MACHINE CUT HELICAL GEARS, running in oil bath, for smooth, quiet operation.

CONTROL INSTRUMENTS centrally placed, for easy supervision of internal operations.

GEVEKE & COMPANY, INC. 25 BROADWAY, NEW YORK 4, N. Y.

MANUFACTURERS' REPRESENTATIVES . SPECIALIZED MACHINERY AND EQUIPMENT . FOUNDED AMSTERDAM 1876

Revolutionary...



fully automatic

"Tomtemper"

Chocolate

Tempering Machine

It Guarantees More Attractive Finish - Finer Fracture - Better Taste

JUST LOOK WHAT THE "Tomtemper" OFFERS:

FULLY AUTOMATIC OPERATION Easy to operate. Requires only one adjustment.

MINIMUM PROCESSING TIME Combines undercooling with intense mechanical mixing to achieve ideal tempering cycle at lowest possible viscosity.

FAST START UP Delivers correctly tempered chocolate less than 4 minutes after starting.

FAST CHANGEOVER Switches from one type of chocolate to another in 3 to 5 minutes.

HIGH OUTPUT Up to 3600 pounds of chocolate per hour; 5000 pounds per hour with accessory cooling.

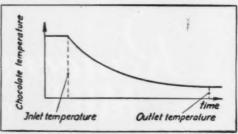
SMALL SIZE Measures approximately 47" x 22" x 20".

ABSOLUTELY HOMOGENEOUS TEMPERING Exposes every particle of chocolate to same tempering treatment.

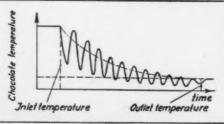
GUARANTEED ACCURACY within ± .9°F of desired temp.

And these are but a few of the many outstanding features offered by the "Tomtemper."

"TOMTEMPER" Thin-Film Tempering Machines are manufactured by TOM'S Laboratory LTD. which also manufactures a line of Fancy Molding Plants and Chocolate Chip Making Machines.



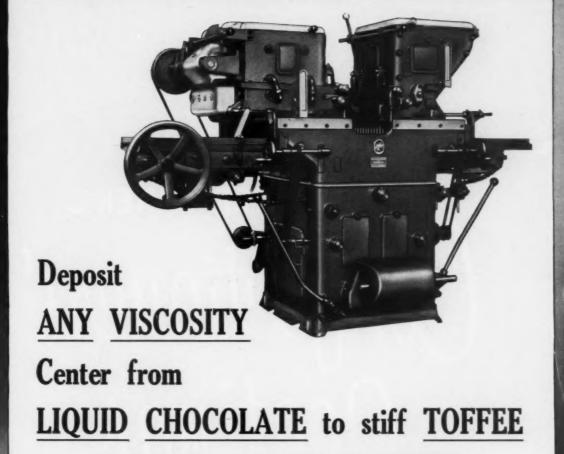
AVERAGE TEMPERATURE of chocolate as it progresses through the "Tomtemper" is shown above,



UNDERCOOLING AND MIXING Graph above shows how "Tomtemper" achieves the outlet temperature by undercooling and mixing.

GEVEKE & COMPANY, INC. 25 BROADWAY, NEW YORK 4, N. Y.

MANUFACTURERS' REPRESENTATIVES . SPECIALIZED MACHINERY AND EQUIPMENT . FOUNDED AMSTERDAM 1876 .



THE LOESCH DOUBLE DEPOSITOR does practically any depositing job you want. It handles pasty, semi-firm, or liquid chocolates; any kind of cream; fruit-caramel and even toffee masses. And that's not all—

It controls the weight of deposits accurately because it's adjustable to very fine limits.

Up to 6 different centers can be deposited at one time using synchronized multiple installations.

A swift change of nozzle bars enables you

to switch from one type of mold to another within minutes, while the pumping system remains untouched.

The machine is fully automatic and can produce up to 120,000 pieces per hour.

Most of all, however, the Loesch Double Depositor features both heavy duty construction and precision engineering—a combination which enables it to stay on the job in continuous operation, year after year, with little or no down time.

Loesch also manufactures Choco-Shell Plants.

MASSES on ONE MACHINE

GEVEKE & COMPANY, INC. 25 BROADWAY, NEW YORK 4, N. Y.

MANUFACTURERS' REPRESENTATIVES . SPECIALIZED MACHINERY AND EQUIPMENT . FOUNDED AMSTERDAM 1876 .

add a Coating of Profit

with WALTER BAKER'S

Confectioners'



WALTER BAKER CHOCOLATE

to your Confections

Drop into Booth 506 at the Conrad Hilton Hotel during The N.C.A. Convention. Inspect the complete Walter Baker Coating Line—the <u>new</u> coatings for high profit, the high-grade coatings for finest quality.

Your Walter Baker Chocolate Consultant will be on hand to help you select the most suitable, most profitable coatings for your own use.

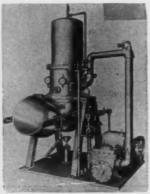
Remember . . . if it's chocolate, Baker's makes it best!





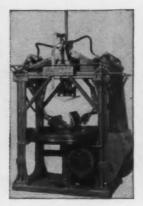
Hohberger Continuous Hard Candy Cutter

Waffles, pillows, chips, or straws. Up to 150 feet per minute. Perfect sealing on filled pieces.



Hohberger Continuous Hard Candy Cooker

Up to 2,000 lbs. per hour. A "Candyman's Cooker."



Berks Mixer

Greatest labor saver in hard candy department.



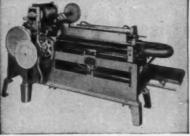
Hohberger Cream Machine

Up to 2,000 pounds per hour of straight sugar fondant with proper doctoring or any amount of corn syrup.



Hontz Cluster Machine

Completely automatic. Does not tie up enrober. Handles any free-flowing nut. Uniform clusters at any rate from 850 to 1,500 lbs. per hour.



Hohberger Continuous Ball Machine

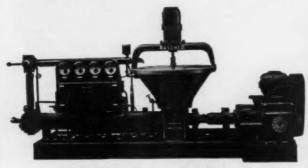
Up to 1,200 lbs. per hour. Forms filled or plain balls, unusual shapes and sunbeam starlights.



Economy Belturns

Economy Belturns conserve space through efficient arrangement of cooling conveyors and packing tables. Bunching and crowding eliminated. Available in all standard widths:

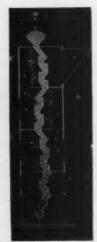
90°, 100° and special angles.



Rasch Tempering Machine
Absolute Accuracy in Tempering Regardless of
Initial Temperature

Uniformly tempers chocolate or compound, plain or with a mixture of nuts or granules, direct from storage tank to enrober or moulding machine.

Capacities from 440 to 6,000 lbs. per hour



PROBAT

Continuous

Cocoa Bean

Roaster

- 1. Guaranteed Uniformity
- 2. Low Operation Costs
- 3. No Bean Breakage
- 4. Over-roast Eliminated

Available in 3 sizes: 600, 1,200 and 2,200 lbs. per hour.

John Sheffman, Inc.

152 W. 42nd Street

New York 36, N.Y.

DU

The smartest switch you can make:



Here's how coatings made with Durkee's PARAMOUNT out-perform on all counts:

- 1. TASTE-excellent eating qualities and flavor never before available
- 2. GLOSS-retain their high gloss indefinitely
- 3. STABILITY provide greater stability, regardless of weather
- 4. BLOOM—protection against fat bloom and grayness never before available

Durkee has spent years developing and perfecting vegetable hard butters that overcome the industry's previous objections. The result: Durkee's new Paramount.

Available in varying degrees of hardness, Durkee's Paramount XX, Paramount X, Paramount C and Paramount B are adaptable to the specific requirements of all types of coatings and seasons of use.

Operators across the country have joined an industry-wide switch to Durkee's Paramount—for top performance at low cost. Save on production costs and offer your customers a better product—by switching to Durkee's Paramount. Durkee-trained specialists will show you how to use these new coatings made with Durkee's

Today—Contact your nearest Durkee Plant

Paramount.

DURKEE'S PARAMOUNT

One of Durkee's Famous Foods Gliden



DURKEE FAMOUS FOODS . ELMHURST, NEW YORK; LOUISVILLE, KENTUCKY; CHICAGO 47, ILLINOIS; BERKELEY, CALIFORNIA

for June, 1954

Page 17





- AROMATICS
- ESSENTIAL OILS
- BASIC FLAVOR NOTES
- VANILLAS

The success of our products has come from laborious, meticulous laboratory development, followed by time-tested application by all types of flavor manufacturers.

Build your flavor business with

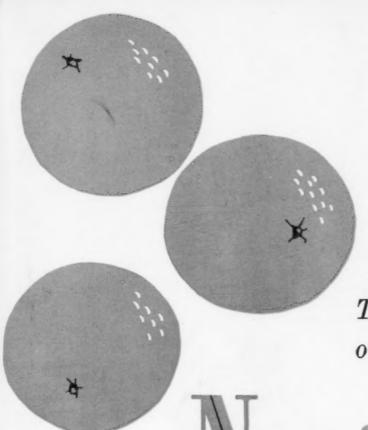
- The fully characteristic notes of Felton's fine gromatics.
- The true uniformity and superb quality of Felton's essential oils, basic flavoring materials and vanillas.



ELTON S

CHEMICAL COMPANY, INC. 599 Johnson Avo., Brooklyn 37, N. Y.

PLANTS: Brooklyn, N. Y. • Los Angeles, Cal. • Montreal, Que. • Versailles (S&O) France SALES OFFICES: Atlanta • Boston • Chicago • Cleveland • Philadelphia • St. Louis • Toronto

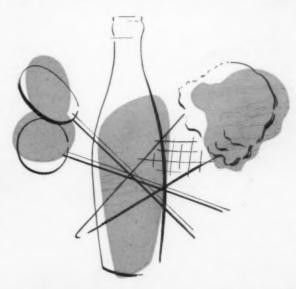


Technical help on color formulas

FOOD COLORS

For many years we have been helping manufacturers to achieve taste-tempting colors in foods and beverages. National Food Color laboratories are staffed with technicians versed in food chemistry as well as color technology.

Whether you are formulating a color for a new product or re-formulating shades of your existing line, we will be pleased to work with you to develop colors with maximum display value and appetite appeal for your foods or beverages.



CERTIFIED COLOR DIVISION







Domino

Does Something about it!

Shows All America How to Stay Slim and Trim and get Sugar's "Energy Lift" too!

- Endorsed by one of America's leading Nutritional Authorities, this booklet is now being offered through full-color advertisements in LIFE and in big-space advertisements in 290 Local Newspapers.
- It's our effort to put SUGAR—and sugar-containing foods and beverages—back in Reducing Diets... where they belong! What's more, it's our effort to help you move your products into the homes of diet-conscious consumers.

FREE! If you would like some copies of Domino's New Reducing Diet Booklet, we'll be glad to supply them. Just write: The American Sugar Refining Company, Box T236, New York 5, N. Y.

Pure
Cane Sugar
Extra Fine
Granulated
American Sugar
Refining Company
Rev Tod. N.T.

America's
Largest
Selling
Sugars!

Domino's "ENERGY LIFT" Campaign is a "PROFIT LIFT" for YOU!



Year after year, Exchange Brand quality proves itself in sales. That's because Exchange Lemon Oil comes only from California lemons grown and skillfully processed by Sunkist Growers.

When a little lemon oil goes so far, why risk buying anything but the best?

Sunkist Growers

PRODUCTS DEPARTMENT . ONTARIO, CALIFORNIA

Produced by

Exchange Lemon Products Co. • Corona, California

Distributed in the U.S. exclusively by DODGE & OLCOTT, INC. 180 Varick St., New York 14, N.Y.

FRITZSCHE BROTHERS, INC. 76 Ninth Ave., New York 11, N. Y.







THROUGHOUT
THE WORLD

Every major advancement in the design of Cocoa presses has a CARVER patent behind it.

There is a variety of sizes of Carver Cocoa Presses to meet every requirement. We solicit your inquiries.

CONSTRUCTED with Precision

DESIGNED with Experience

SERVICED World-Wide

FRED S. CARVER INC.
HYDRAULIC EQUIPMENT
RIVER & CHATHAM RDS., SUMMIT, N. J.

(see our exhibit ... Booth 14 NCA Exposition)

Overseas Agents

BAKER PERKINS LTD.
PETERBOROUGH, ENGLAND



Better texture and taste build candy sales—and repeat sales. OK BRAND Confectioner's Corn Syrup gives your candy extra quality at no extra cost. That means more profits for you!

Remember Hubinger's Other Famous Products For Confectioners:



THIN BOILING STARCHES MOLDING STARCHES

ATTENTION DRUM BUYERS! If tank wagon or tank car service is not available at your plant location, investigate OK BRAND Dri-Sweet (corn syrup solids). In many areas today OK BRAND Dri-Sweet is the most economical form in which to buy top quality corn syrup. OK BRAND Dri-Sweet has other advantages too—less cooking time; clearer colors; and more convenient to receive, store, and use!

pree technical service

confectioner's corn syrup

THE HUBINGER COMPANY, KEOKUK, IOWA

Established in 1881

Branch offices: New York • Chicago • Los Angeles • Boston • Charlotte

SEE THESE MACHINES AT THE N.C.A. CONVENTION—BOOTHS 201-202

No Steam? This Gas Vacuum Cooker Does The Job

See the new, redesigned and improved model G-3 Simplex Gas Vacuum Cooker at the Convention. Now equipped with a new hydraulic lift



and kettle tilting method, it makes working conditions easier, takes the hard work out of hard candy. It is well suited to plants that do not have high pressure steam available. Operating on gas, it comes as one complete unit, including vacuum pump and motor, vacuum gauge, gas fired furnace blower and motor.

With a cooker capacity of from 25 to 100 pounds per batch, the machine is designed for efficient, economical production of fruit drops, stick candies, lolly pops and other types of hard candies, as well as quicker cooling of fondant syrup.

Additional information is available from Vacuum Candy Machinery Co., 15 Park Row, New York 38, N. Y.

This New Machine Should Be of Interest to YOU

The Racine Confectioners' Machinery Co. is producing a machine which will handle solid sticks, clear or pulled, as well as sticks with honey-combed centers. Called the Racine Stick Candy Machine, it sizes, twists, and cuts the sticks of any diameter and length.



Requiring only one operator to feed the machine from a batch roller or flat board, the machine sizes, twists and cuts automatically.

The operating speed is controlled by a variable speed transmission. Capacity is from 300 to 900 inches per minute. It can turn out 300 oneinch sticks or 100 nine-inch sticks per minute.

Complete information is available from Racine Confectioners' Machinery Co., 15 Park Row, New York 38, N. Y.



PERFECT FOR

molded or enrobed

CHOCOLATES
liquid or cream filled

EGGS

NOVELTIES

By means of a special rolling device, the SAPAL Wrapping Machine will also wrap small solid or filled eggs, bottles, novelties, and other round shapes. The change from one shape to another requires only a simple adjustment and an easy change of parts.

Variable speed controls and an automatic device which stops the foil when the candy supply is exhausted are additional economy features of the SAPAL Wrapping Machine.

Write today for illustrated folder.

Exclusive Representative for Sales & Service in U.S.

VACUUM



RACINE

15 PARK ROW, NEW YORK 38, N. Y.

Western Office and Factory: Racine, Wis. Eastern Factory: Harrison, N. J.



In the galaxy of competitive food and confectionery products that constantly vie for your customers' attention, only the brightest stars command perennial interest. Regardless of place or season... superb flavor is a primary value and automatically marks a product for repeat performances. DOLCO Flavors, one of D&O's most widely acclaimed special lines, provide this essential value. High flavor concentration, recommend their use to flavor manufacturers as well as food processors, and all color is derived from natural fruit. DOLCO Flavors can star your product... and the D&O Flavor Laboratories will give all technical assistance. Consult D&O.





DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.
Sales Offices in Principal Cities

Our 155th Year of Service



ESSENTIAL OILS . AROMATIC CHEMICALS . PERFUME BASES . FLAVOR BASES . DRY SOLUBLE SEASONINGS

National Confectioners' Association 71st Annual Convention

Convention Program

Conrad Hilton Hotel—Chicago

June 6-10, 1954

Exposition Schedule:

Monday—2 p.m. to 8 p.m.

Tuesday—1 p.m. to 6 p.m.

Wednesday—12 noon to 8 p.m.

Thursday—11 a.m. to 5 p. m.

Monday, June 7, 1954

NCA-AACT JOINT PRODUCTION SESSION All NCA and AACT Members and Guests Invited

8:00 A.M.—Breakfast
Presiding: Justin J. Alikonis
Paul F. Beich & Company, Bloomington, Ill.
President, American Association of
Candy Technologists

9:00 A.M.—OPENING AND WELCOME Philip P. Gott President National Confectioners' Association

9:05 A.M.—"THE EUROPEAN CHOCOLATE
AND CONFECTIONERY INDUSTRY TODAY"
Norman W. Kempf
Manager of Chocolate Development,
Division, General Foods Corporation
Walter Baker Chocolate and Cocoa,
Dorchester, Massachusetts

9:20 A.M.—"NEW APPLICATIONS OF FUNC-TIONAL INGREDIENTS" Presiding: Ernest C. Peakes New England Confectionery Co., Cambridge, Mass. **EMULSIFYING AGENTS** Benjamin R. Harris The Emulsol Corporation Chicago, Illinois ANTIOXIDANTS Dr. Lloyd Hall **Technical Director** Griffith Laboratory Chicago, Illinois HUMECTANTS H. B. Cosler Technologist, General Products Division, Food Laboratories Quartermaster Food and Container Institute Chicago, Illinois

10:00 A.M.—CANDY RESEARCH AND DE-VELOPMENT John Henry President DeWitt P. Henry Company Philadelphia, Pennsylvania PENNSYLVANIA MANUFAC-TURING CONFECTIONERS' AS-SOCIATION CANDY RESEARCH PROJECTS C. R. Kroekel Kroekel-Oetinger, Incorporated Philadelphia, Pennsylvania SOME FACTS ABOUT SUGAR IN CONFECTIONERY Dr. Lawrence F. Martin Head Sugarcane Products Division Southern Regional Research Lab-U. S. Department of Agriculture New Orleans, Louisiana A REPORT ON CANDY RE-SEARCH AT THE GEORGIA AG-RICULTURAL EXPERIMENT STATION Bob McCormack, Jr. Superintendent, Bob's Candy & Peanut Company Albany, Georgia

10:40 A.M.—NEW DEVELOPMENTS IN FOOD INDUSTRIES EQUIPMENT
Milton E. Parker
Professor of Food Engineering
Illinois Institute of Technology

PACKAGING
A discussion of laminates, foils and other materials including transfer and absorption of odors.
Frank J. Rubinate

11:00 A.M.—NEW DEVELOPMENTS IN

Chief, Subsistence Division Container Laboratories

Quartermaster Food & Container
Institute

11:30 A.M.—THE RESPONSIBILITY OF THE CANDY TECHNOLOGIST TO THE CANDY INDUSTRY
Victor L. Bump
The D. L. Clark Company, Pittsburgh, Pennsylvania
Dr. Charles E. Rimpila
E. J. Brach & Sons, Chicago, Illinois

A. Rodney Murray
Minter Brothers, Incorporated, Philadelphia, Pennsylvania
Nathaniel J. Peterson
W. F. Schrafft & Sons Corporation,

12:00 NOON—LUNCHEON

—NORTH BALLROOM Annual Meeting American Association of Candy Technologists—NCA and AACT members and guests invited.

Presiding: Justin J. Alikonis
President, American Association of
Candy Technologists
Presentation of Stroud Jordan
Award by Hans Dresel, 1953 Recipient, to Justin J. Alikonis
Report of Officers

Boston, Massachusetts

2:00 P.M.-8:00 P.M.-EXPOSITION OPEN

Tuesday, June 8 North Ballroom

10:00 A.M.—OFFICIAL OPENING OF THE NCA 71st ANNUAL CONVENTION
Philip P. Gott, President National Confectioners' Association

10:10 A.M.—THE BUSINESS MEETING—AND CANDY A STAPLE FOOD Victor H. Gies, Vice President Mars, Incorporated NCA Director and Chairman, 71st Convention Program Committee

10:20 A.M.—THE SUGAR INDUSTRY EDUCA-TIONAL ADVERTISING PRO-GRAM
Ernest W. Greene, President
The Sugar Association, Incorporated

10:40 A.M.—PLANNING FOR PROFITS—
PANEL DISCUSSION
Moderator—Charles L. Smessaert
Executive Vice President
Walter H. Johnson Candy Company
PANEL MEMBERS

D. S. Farquharson, Controller, Mars, Incorporated 1:

M

10

11

fo

R. J. Alberts, Controller, Walter H.
 Johnson Candy Company
 Arthur Bridge, Controller, E. J.
 Brach and Sons

J. C. Walsh, Secretary-Treasurer, American Licorice Company

11:45 A.M.—WHAT THE EXPOSITION OF-FERS YOU David P. O'Connor Penick & Ford, Ltd., New York, N.Y. Chairman, 28th Confectionery Industries Exposition

11:55 A.M.—WHAT DO YOU STAND FOR?
Submission of NCA Proposed Policy
Statements
W. C. Dickmeyer, President, Wayne
Candies, Incorporated, Fort

Wayne, Indiana NCA Director, Chairman NCA 71st Convention Resolutions Commit-

tee

12:00 NOON—ADJOURNMENT

12:00 NOON—LUNCHEON AND HONOR
GUESTS RECEPTION
Honored Guests to Include:
(a) Tuesday Guest Speakers
(b) Directors and Concept Conven

(b) Directors and General Convention Committee

(c) Representatives of Supplier Associations

(d) Representatives of Distributor Associations

12:30 P.M.—OPENING LUNCHEON
Presiding: Theodore Stempfel, E. J. Brach
& Sons, Chicago, Illinois

Page 28

THE MANUFACTURING CONFECTIONER

General Chairman NCA 71st Annual Convention and 28th Confectionery

Industries Exposition

INVOCATION: U.S. Navy Chaplain INTRODUCTION OF HONORED GUESTS—Philip P. Gott

LUNCHEON

Introduction of Speaker — Victor Gies, Program Chairman

"A PROFIT IS NOT WITHOUT HONOR"

Harry Chapman, Past President, National Confectioners' Association

"THE CRITICAL INDO-CHINA SITUATION"

Dr. William Montgomery, Professor of Political Science, Northwestern University

1:00 P.M. - 6:00 P.M.—EXPOSITION OPEN

Wednesday, June 9

Morning Session North Ballroom Today's Production and Ingredient Problems

Presiding: W. W. Cassidy Vice President, National Confectioners' Assn. Sweet Candy Company, Salt Lake City, Utah

10:00 A.M.—THE COCOA BEAN PROBLEM— A PANEL DISCUSSION

Moderator: William E. Brock, Jr. President, Brock Candy Company, Chattanooga, Tenn. PANEL MEMBERS

Justin J. Alikonis, Paul F. Beich and Company, Bloomington, Illinois

Henry Blommer, President, The Blommer Chocolate Company, Chicago, Illinois

Bernard S. Blumenthal, President, Blumenthal Brothers Chocolate Company, Philadelphia, Pennsylvania

Norman Bruce, Durkee Famous Foods, Div. of The Glidden Company, Cleveland, Ohio August Merckens, President, Merckens Choc-

olate Company, Incorporated, Buffalo, N.Y. Robert Schnering, President, Curtiss Candy

Company, Chicago, Illinois Leonard J. Schwarz, Consultant, American Cocoa Research Institute, Washington, D. C.

Jacob M. Shaffer, Deputy Director, Food Industries Division, Dept. of Commerce

Clifford R. Spiller—General Manager, Walter Baker Chocolate & Cocoa Div., General Foods Corporation, Dorchester, Mass.

John Whittaker, Executive Vice President, New England Confectionery Company, Cambridge, Mass.

11:50 A.M.—YOUR INDUSTRY POLICIES RE GOVERNMENT AND PUBLIC ISSUES

W. C. Dickmeyer

President, Wayne Candies, Incorporated, Fort Wayne, Indiana

Chairman NCA 71st Convention Resolution Committee 12:00 NOON—ADJOURNMENT—NO AFTER-NOON SESSIONS

12:00 NOON-8:00 P.M.—EXPOSITION OPEN 8:00 P.M.—NCA PRODUCTION FORUM

NORTH BALLROOM

Presiding: C. R. Kroekel

Kroekel-Oetinger, Incorporated, Philadelphia, Pennsylvania

Chairman, Research Committee, Pennsylvania Manufacturing Confections Association

8:05 P.M.—INSTRUMENT TECHNIQUES
AND MECHANIZED CANDY
PROCESSING
Lloyd Slater
Midwest Editor

"FOOD ENGINEERING" Magazine

8:25 P.M.—ROUND TABLE

Presiding: G. Lloyd Latten
Vice President, Production Manager
Schutter Candy Company, Chicago, Illinois
Review of Monday Joint NCA-AACT Technical
Session

Speakers of Monday program to constitute panel

Thursday, June 10

Presiding: Victor Gies Vice President, Mars, Incorporated, Chicago, Illinois

10:00 A.M.—YOUR CONSUMER TODAY—VIS-UAL PRESENTATION BY LIFE MAGAZINE

10:30 A.M.—YOUR DISTRIBUTOR LOOKS AT CANDY DISTRIBUTION POL-ICIES

Chairman: Victor H. Gies WHOLESALERS

Leroy Ball
King Tobacco Company
Flint, Michigan
Joe P. Fritz

J. P. Fritz Candy Company Newport, Minnesota

AUTOMATIC MERCHANDISERS
Herb Geiger
Geiger Automatic Sales Company

Milwaukee, Wisconsin

THEATERS

Abe Z. Bloom Balaban & Katz Chicago, Illinois

VARIETY STORES Grant B. Lamberton Buyer, S. S. Kresge Company Detroit, Michigan

CHAIN FOOD STORES AND SUPERMARKETS

Bob Greenfield
Head Grocery Division
Penn Fruit Stores
Philadelphia, Pennsylvania

11:00 A.M. - 5:00 P.M.—EXPOSITION OPEN 8:00 P.M.—"THE CANDY SPINNERS WHIRL," DINNER-DANCE

Paul F. Beich Co. Earle S. Bowers Co. Boyer Bros., Inc. E. J. Brach & Sons Brock Candy Co. Charms Company
Clark Bros., Chewing Gum Co.
The D. L. Clark Co.
The Cracker Jack Co.
Chas. P. Crawford
Curtiss Candy Company
Dairy Maid Chocolate Company Delicia Chocolate & Candy Mfg. Co., **Delson Candy Company** G. S. Dowdy Candy Co Falcon Nut & Candy Co. Frank H. Fleer Corp. Frantz Candies, Inc. Fry Cadbury, Ltd. Goldenberg Candy Co. H. B. Goss Candy Co. Hanscom Bros. H. K. Hart Confectioners, Inc. Hawley & Hoops, Inc. Heidelberger Confectionery Co. De Witt P. Henry Co. **Hesch Candies Hupper Candies** Robert A. Johnston Co. Keppel's, Inc. King-Kup Candies, Inc. Kraft Foods Co. Kroger Co. Kroekel-Oetinger, Inc. Kwatta Chocolate Co. Leaf Brands, Inc. Edgar P. Lewis & Sons, Inc. Loft Candy Corp. Walter M. Lowney Co., Ltd. Lucy Lynn Chocolate Co. Luden's, Inc. Mars, Inc. Mary Sue Candies, Inc. Mason Au & Magenheimer Conf. Mfg. McAfee Candy Company McCormick's Ltd. R. C. Miesse Candies Minter Bros., Inc. William Neilson, Ltd. New England Confectionery Co. Peter Paul, Inc. Plantation Chocolate Co.

Pontello Candies
Quaker City Chocolate & Conf. Co.,
Inc.
Quaker Maid Company
H. B. Reese Candy Co.
Reymer & Brothers, Inc.
Schoener Candies, Inc.
W. F. Schrafft & Sons, Corp.
Schutter Candy Co.
Shellenberger's, Inc.
Russell Stover Candies
Stutz Candy Company
Tuxedo Candy Company
Wallace & Company
F. B. Washburn Candy Corp.
Wayne Candies, Inc.
James O. Welch Co.
Weston's, Inc.
Stephen F. Whitman Co.
Williamson Candy Co.
Ph. Wunderle

Zipf's, Inc.

S. Zitner Co.

Ambrosia Chocolate Co.
Bachman Chocolate Mfg. Co.
Walter Baker & Co., Inc.
Blumenthal Bros., Inc.
Hershey Chocolate Corp.
Hooton Chocolate Co.
Klein Chocolate Corp.
Merckens Chocolate Co.
The Nestle Company, Inc.
Rockwood & Co.
A. N. Stollwerck, Inc.
C. J. Van Houten & Zoon, Inc.
Wilbur-Suchard Chocolate Co., Inc.

Proceedings of the Eighth PMCA Production Conference

The first production conference on the Franklin & Marshall campus at Lancaster drew a record attendance. An average of two men were registered from each of the ninety confectionery and chocolate manufacturers listed at the left.

David Sykes, the moderator of the first days sessions, opened this conference by introducing Theodore A. Distler, president of Franklin & Marshall College, who greeted the association and conferees to the college.

Mr. C. R. Kroekel, chairman of the Research Committee of the Pennsylvania Manufacturing Confectioners Association, gave a brief report of the activities of the research committee. He indicated that most of the time since the previous meeting had been devoted to moving the research program from Lehigh University to Franklin & Marshall College. A research program is being organized there, and a search is underway for a Director of Research. In the meantime, two preliminary studies have been started. One is on the moisture content of syrups, and the other is on the latent heat of fusion of chocolate.

The Bulk Sugar Picture—A Resumé

in

L

ag th th

ta

fa

ea

th

ch

tv

la

of

fo

th

to

te

us

re

be

aı

Se

G

la

th

CE

na

in

fu

fo

Edward W. Meeker, The American Sugar Refining Company, lead off a series of papers on the handling of dry sugar in bulk. The following papers were:

Pneumatic Conveying of Sugar, Roscoe R. Heard, Jr., Fuller Company.

Bulk Sugar in Unit Containers, Edward A. Pagels, Tote System, Inc.

Mechanical Handling of Bulk Sugar, John F. Bertuccio, J. C. Corrigan, Inc.

These four papers will be published in our July issue.

Studies on Shelf Life of Coconut Bars, H. B. Cosler, Quartermaster Food and Container Institute. This paper is published in this issue on page 83.

THE MANUFACTURING CONFECTIONER

The Control of Gloss in Using Hard Butter Coatings, Justin J. Alikonis, Paul F. Beich Company. This paper is published in this issue on page 76.

Lecithin, Oscar M. Stout, Ross & Rowe, Inc.

Lecithin belongs with surface active or wetting agent compounds. It has been pictured as having three arms, one of which is attracted to water, and the others to fats. As the moisture-loving arm attaches itself to the non-fatty particles in a monomolecular thickness of film, the other arms, the fat-loving ones, bring a thin film of fat to cover each particle of non-fat. More fat than necessary to cover the non-fat particles results and fluidity is given the entire mass. Not only does lecithin assist in wetting the solids in the chocolate by the cocoa butter, but the finished chocolate also shows increased wetting power. This is best seen in moulded goods, particularly hollow goods which show consistently better moulding and much less evidence of air bubbles.

Many users of coatings believe that even if there were no savings in cost through the use of lecithin, that its use would still be merited because of the better gloss obtained on finished coated goods. The ability of lecithin to stabilize the viscosity of a chocolate coating so that it retains its fluidity at a given temperature and temper, regardless of the type of coating equipment used or humidity conditions normally present in the coating room, is of utmost importance in maintaining uniform percentage of coating used on the goods.

The best time to add lecithin is after the chocolate has been completely processed. The amount of lecithin to use should be carefully determined for each type of coating. The smaller the size of the particles, the greater the surface, hence more lecithin as well as cocoa butter will be required in a very smoothly refined chocolate.

To determine the quantity of lecithin required to stabilize a chocolate at the lowest butter content for the viscosity required, make a test run using as little cocoa butter as possible. After the refining, conging, and required heat treatment have been completed, add lecithin in small, measured amounts until no further drop in viscosity is observed. (This can best be done in the laboratory.) Greater reduction in butter and a stabilized chocolate are had when the viscosity of the chocolate is first brought to the lowest possible point with lecithin and cocoa butter then added to bring to the viscosity required. Standard production procedure can be established from the above determination with the assurance that maximum savings in cocoa butter, and dollars have been made.

Lecithin is used beneficially in most fat containing candies such as fudge, toffees, caramels and other chewing candies. Lecithin emulsifies the fat with the moisture and incorporates it into the batch, avoiding a greasy surface. Because the moisture is emulsified with the fat by lecithin, some fudge manufacturers have found that the moisture

is not lost so rapidly and the shelf life is extended somewhat. One percent of lecithin, based on the total fat in the batch is usually enough to give the desired results.

The Part Statistical and Quality Control Plays in the Candy Industry, W. H. Corwin, Brock Candy Company.

Quality control starts with the raw materials and each ingredient is inspected. Plant sanitation comes within the province of thorough quality control. Sugar is checked for clarity and dark specks. Sedimentation tests are run on all soluble ingredients. The measurement of flavors and colors and the dispensing of these to the candy maker is a function of quality control. A taste panel has resulted in the improvement of flavors.

Statistical Quality Control is the adaption of statistical methods to quality control work. All quality inspection must be separate from production and responsible to top management. Many forms of charts and numerous calculations can be made in this large field. Charts used most often in the Brock plant are the average and range chart and the defect chart. The range chart shows the variation within a sample while the defect chart shows the number of defects in a product.

SQC studies on the processing of the Brock Bar have resulted in improved quality, lowered costs, better weight control, and reduced scrap. As this bar consists of a cast cream center which is caramel coated, then covered with peanuts and lastly, enrobed with a compound coating, weights are very hard to control. The weights of the centers are checked as variability of the mogul pumps, machine setting and fluidity of the candy produces irregularity. The weight of caramel applied is checked and the amount of peanuts picked-up is calculated. samples are constantly run to let the enrober operator know the percentage of coating on the bars.



Inspection of the finished package, and a frequency distribution of final weight is being kept. Total variation of the product has been reduced by 25 per cent. Further study should keep the variation down to a minimum.

Packaging With Chocolate Board, John R. Logan, Newton Paper Company.

"The manufacture of quality chocolate board is a highly-specialized and complicated process requiring care, skill, and experience," Mr. Logan stated. "Chocolate board must be non-toxic, and have no objectionable odor, be of compatible color to all shades of actual chocolate even if the board becomes spotted or saturated with oils from the candy, run readily in automatic packaging machinery, be free as possible from all traces of metal, and be available in a wide range of weights for all possible uses. That chocolate board can be all of these and yet cost so little is not the least of its virtues."

The four specific uses of chocolate board in packaging are: bars, set-up and folding boxes for retail, and bulk. The use of chip board in bulk packaging incurs the risk of odor contamination. Mr. Logan suggested a review of packaging programs to find where chocolate board can be put to better use.

What to Expect from a Corrugated Shipping Container, Charles H. Carpenter, Kieckhefer Container Company. This paper is published in this issue on page 41.

New Aspects of Instrumentation, William J. Scarlett, Minneapolis-Honeywell Regulator Company.

This talk was illustrated by citing instances where tangible results have been achieved by automatic control.

A large bar manufacturer wished to find process methods and procedures which would save time, labor, space, and eliminate (as far as possible) product loss due to quality rejection. Production lines were made continuous through investing in considerable new equipment and as a result, process time was cut from 16 hours to 35 minutes, product rejection was virtually eliminated, quality control was vastly improved and uniformity became a statistical constant. Costs were sharply reduced and the amount of factory space required for the process was reduced more than one-third. Any one can follow the steps taken by this bar manufacturer. These steps are: (1) analyse the problem, (2) evaluate the factors, and (3) engineer the entire layout to provide the exact control features necessary for the overall operation. With the bar manufacturer, two years were required to effect the change.

Many plants do not have the volume to support a continuous process. Others have a diversity of products making continuous processing out of the question. There are many places in confectionery manufacturing where improvements can be made and new procedures adopted. Justification for changes lies in cost reduction. Quality improvement and uniformity of product follow as a bonus.

Throughout the chocolate handling operation, temperature and humidity conditions are of the utmost importance. Liquid chocolate is pumped directly to Stehlings tanks in an insulated room of the Tuxedo Candy Co. After flowing to cooling kettles where its temperature is reduced, the chocolate is pumped through electrically heated lines to drip kettles where the temperature is stabilized. From these, it is "dripped" to the enrobers. Conditions throughout are maintained at constant values by automatic controls. Complete automotion of enrobers has been attained.

End point signalling, the accurate measurement of the end point temperature signalling the completion of the process, has been installed on Simplex vacuum and pre-cook kettles. Portable thermocouples are used in kettles without agitators. Thermocouples are permanently installed on agitator blades and connected through a commutator to an Electronik instrument from which the temperature of batches may be read. Conditioning rooms are controlled within close limits by circular chart Electronik instruments.

All processes cannot be streamlined and revised but production operations must be reviewed in view of many recent developments. Instrumentation and automatic control can regulate process variables to a close degree of accuracy and thereby improve quality.

Antioxidants in Candy and Candy Packaging Materials, Dr. B. N. Stuckey, Eastman Chemical Products, Inc. This paper is published in this issue on page 47.

le

p

a

10

a

n

tı

iI

h

C

C

re

ei

a

fa

F

cl

cl

ne

Ta

th

fo

Milk Chocolate Technology, Jay C. Musser, Klein Chocolate Company. This paper is published in this issue on page 35.

The Handling and Delivery of Liquid Chocolate, Warren L. Newcomer, Wilbur Suchard Chocolate Company. This paper is published in this issue on page 89.

Dutch Chocolate, John van Irsel, Kwatta Chocolate Company.

Holland consumes plain vanilla chocolate: a product development of the special qualities of cocoa, its flavor and taste. In the U. S. A., generally chocolate is an accessory or component of items deriving their characteristic flavor from sources other than cacao products. The Dutch and Americans have different tastes. The Dutch like the strong, penetrating flavor, the sweet bitter taste and the dark break of plain chocolate. Americans are attracted by a sweeter taste, by bright colors and a combination of different aromatic elements.

American candy makers using chocolate as an

adjunct are in a more favorable position than the Dutch who must enlarge their economic basis. Possibilities are: (1) to establish an assortment of finished products similar to those of America; (2) to direct attacks against certain principal materials, e.g., cocoa butter. (Recently, compound dark vanilla chocolate-type coatings have been developed.) And (3), to abandon cocoa and try to find a substitute.

Candy—Past, Present and Future; James A. King, The Nulomoline Division; Clifford Clay, Stephen F. Whitman & Son, Inc.; Peter C. Laureys, Loft Candy Corporation.

Mr. James A. King, Nulomoline Division, The American Molasses Co., New York, reviewed the historical aspects of candy development. The past 50 years have witnessed startling mechanical improvements. More recently, strides towards continuous processing have been made. The cooking and processing of candies continuously poses the question of the 'versatility of the equipment so that variations in types of candies can be made,' and Mr. King suggested 'that consideration be given to the making of composite candies.' Samples of Plastic Coconut Cuts and Whipped Creme Cast Nougat, two distinct types of composite candies were passed among the audience.

Mr. Clifford Clay confined his remarks to 'Old Fashioned Molasses Candies.' "The basis of Molasses Candy of any period Should Be molasses," said Mr. Clay. But molasses candy has become practically obsolete because of the tendency to lower standards by the incorporation of scrap. At present, standardized molasses may be purchased and now that chocolate is no longer available for low priced goods, finer uncovered lines will appear and among them some of the best of the old time molasses ones.

Mr. Peter C. Laureys looked back over the fiftyodd years he has been in the confectionery industry and noted that 'there have been few changes insofar as candy itself is concerned.' Methods of manufacture have improved. New raw materials have eliminated many problems of the old-time candy-maker. "Modern equipment, however, has made possible great progress in cooking, forming, cooling and packing," Mr. Laureys stated, with reference to hard candies which "are neither different nor better than those made half a century ago." "Candy Bars, I must admit are of better quality and greater variety than those made years ago. Competition has made it necessary for the manufacturer to produce quality bars," Mr. Laureys said. For the future, the speaker predicted that 'the chemist will find a way to keep fat bloom from chocolate regardless of the weather, hard candy will not become sticky, cream wafers will not spot nor dry, ever, butter taffies and creams won't go rancid, . . . , but, in the meantime, let's not forget that a customer lost due to poor quality, is a customer gone forever.'

Questions & Answers

The questions and answers given below were taken from the discussion period at the end of the conference. The questions came from the attendees and the answers, for the most part, were given by the speakers on the program.

Q. Is Silicone paper much higher in cost than other paper?

A. About three times the cost, about 42¢ per pound, in 1,000-pound lots.

Q. It was shown that plywood was used in insulation of bulk sugar cars. Was there any trouble in splinters or chips in sugar. Could a man making his own sugar bin use it?

A. To date there have not been any complaints on this score. If someone poked down with a sharp instrument, he might damage it, but so far after two years, nothing has yet damaged them. If the plywood lined bin, for insulation, were used with care, it should be perfectly safe and would not chip or splinter.

Q. What is the latest method of crystallizing creams?

A. Under some conditions it is possible to apply steam, or a thin coating of water, sugar and gum arabic, over cream centers or hard type bon bon creams, and then dust them in fine granulated sugar, and run them through a steam vapor and dry them. That method is being used. It might not be necessary to apply sugar crystals, as the steam will dissolve some sugar on the surface, and will then re-crystallize, forming a crystal structure similar to the sanding type.

Q. Are there liquid chocolate trucks available for split loads, of two or more different types of coating in one load?

A. Not to anyone's knowledge.

Q. What causes the off flavor in compound coat-

ings on long storage?

A. Our coatings have milk solids, but whole milk is used in the centers. We are changing them to milk solids as they will be more stable. In the case of using whole milk in compound coatings, some of the butter fat will raise to the surface at 100 degrees and become rancid. In coatings, whole milk should not be used over a few percent, to keep maximum shelf-life.

Q. If the temperature of the enrober cooling water varies during the year, can it be controlled to give

good enrober cooling performance?

A. Any water from a natural source will vary during the year. The answer is in providing enough valve capacity to allow enough of a higher temperature water through to do the cooling job. Of course you cannot cool anything below the temperature of the water, nor approach it, but as long as the water stays at least four or five degrees below the desired temperature, it can be controlled, with enough valve capacity, to do a good cooling job.

Q. Are the names for corrugation "flutes" uniform

in the trade?

- A. There are three types of "flutes" commonly used. "A flutes" which are 32 corrugations to the foot, "B flutes" which are about 52 to the foot, and "C flutes" which is halfway in between. For highest compression, "A" gives the highest value. On the other hand, for heavy goods, "B" is preferable because it has more corrugations to the foot.
- **Q.** How can one break the binding power of lecithin? (This question was asked in connection with the problem of reclaiming scrap candy containing chocolate and other candies.)
- A. There is no way known that will work well, and completely break the bonds between the fat and moisture. It was suggested that another emulsifier might be added that has a stronger attraction to the non-polar portion of lecithin than it has for cocoa butter. The combined emulsifier would have only polar portions free, having no effect on cocoa butter, provided that an excess of the second emulsifier was not added.
- Q. Is there any way that a thermocouple can be introduced in a mixer kettle without the use of a commutator?
- **A.** There are some very flat thermocouples being developed which might be used in the side of kettles, which would not interfere with the action of scrappers and mixers.
- Q. What are the best enrobing temperatures for compound coatings?
- A. It actually depends on the Wiley melting point of the fat, and the method of feeding the enrober. There are so many variables, it is dangerous to try to pin an exact temperature down on the basis of the melting point of the fat. In the method of feeding, where the coating is batch fed to the enrober, you can enrobe at about four degrees above the Wiley melting point of the fat. In the continuous feed method, I think you will find that you will enrobe a few degrees below the Wiley melting point. If you buy your coat-

ing, check with the supplier of the coating. If you make your own, in the hot process, you will enrobe at about 2 degrees above the Wiley, and in the cold method it will be about 4 degrees below the Wiley, and you drip in at the Wiley melting point.

Q. What might cause crystallization in cordial cherries after 6 months storage, at 60 deg. F., and

how could it be prevented?

A. Amount of original moisture content of the fondant should be high with that much storage, as some will come out in storage. Enzymes must be active. Crystals that do form will be invert sugar crystals. That condition has also been traced to too low storage temperature, the lower the temperature the faster the crystals will form and the larger they will be.

Q. What are the ways that silicone paper is used

in candy manufacturing?

A. On a cookie dropper especially, there is trouble getting the candy free from paper. When the cream pieces are set up on silicone paper they can be turned over on the enrober, and the paper will come right off without a trace of sugar on it. The paper can be used over and over again. We have used it 14 to 16 times, before replacing it.

Q. What is the maximum amount of whole fat milk powder that should be used in the manufacture

of a cocoa coating?

A. My own experience is only 4% at maximum, and to use 2% for safe results, and that has to be followed by the use of emulsifiers.

Q. Is there any trouble with the use of cocoa coatings on high moisture centers?

al

0

u

al

th

SI

fr

cl

m

of

SC

fa

in

cl

- A. There are other problems. Most users of compound coatings have been advised to use less of that type of coating than of chocolate, and have followed it fairly well. However, this thinner coating will raise problems of leaking that would also come up if a thinner chocolate coating were used, and are not especially the cause of the compound coating. We have found very little, if any, difference.
- Q. Could you outline a cooking procedure of the syrup portion of a nougat batch using a vacuum kettle. Finished at 275 degrees. What temperature should the batch be at the time of taking from the vacuum for the best incorporation of the frappe and fat?
- A. What he wants to do is make salt water taffy. I don't see how he could make nougat in a vacuum pan. It would not be nougat, it would be taffy.
- Q. Can you make a cast chewy nougat that will not grain off?
- **A.** Add more corn syrup, taking the mixture, adding the frappe, and casting into starch, but that would have to have a lot of doctor in it, in order to hold up.
- Q. What advantages would there be to pouring caramel or nougat on silicone paper and what other advantages would there be to using silicone paper? Could it be used on slab jelly or marshmallow work?
- **A.** You would be better off using ordinary kraft, as there is no need to use this paper for high moisture candies.

Milk Chocolate Technology

by J. C. Musser, Chief Chemist, Klein Chocolate Company

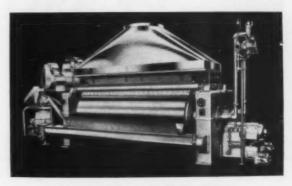
THE purpose of this paper is to consider some of the various methods used in the manufacture of milk chocolate, particularly the processing of the milk itself. In America, at least, although detailed figures are not available, it is safe to say that a large portion of the cocoa beans ground, which ultimately find their use in chocolate coatings, or chocolate bars as such, are consumed as milk chocolate. The acceptance of this product by the consumer is certainly strongly suggestive that milk chocolate has a flavor which gives a pleasing sensation to the palate.

Although it is impossible to separate the milk flavor from the chocolate characteristic in the final milk chocolate product, it has long been known that the milk itself very definitely provides a significant part of the total flavor. For these reasons, let us look at some of the characteristics of the processes for manufacture of milk in chocolate.

There are two definite sources for the milk flavor in chocolate. The first, the raw material, itself. The second, the manufacturing method and conditions under which the milk is dehydrated and made into chocolate. Today, with modern supplementary feeds and sanitation on the farm the first is not nearly as important as the second.

EDITOR'S NOTE: Mr. Musser distributed samples of milk chocolate, in which the milk was treated in three different ways. Limited supplies of these samples are still available, and may be had by writing Mr. Musser at the Klein Chocolate Company, Elizabethtown, Pennsylvania.

It would be correct to say that there are three basic processes in the manufacture of milk for milk chocolate. In the first case, which we shall call the "liquid milk process," the milk received directly from the farm is reduced to some type of dry milk product in the chocolate manufacturer's plant in the presence of cocoa matter. In the second case, a finished dehydrated milk product, such as roller or spray dried milk, is received by the chocolate manufacturer from the dairy plant and is utilized in that form in the chocolate product. This process we shall call the "dry milk process." The third class of milk products, which may well represent every possible and conceivable combination of the first two, is an extremely important section today as we shall see. The important dif-ference between the "dry milk" and "liquid milk" processes, is the moisture content of the milk when the cocoa matter is added.

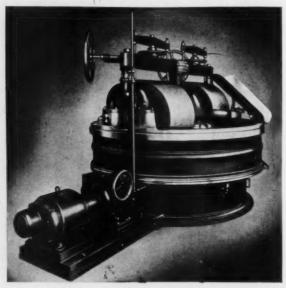


Atmospheric Double Drum Drier

Photo courtesy of Blaw-Knox Company

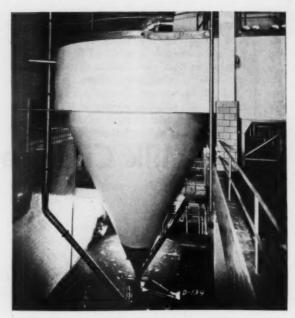
It is not our purpose here, to consider which is the best of these products, if indeed, such a differentiation could be established, since consumer tastes vary widely and preferences for each exist. Rather, let us look at the characteristics of some of the processes, and at the same time consider the samples which we have here, representing three different types of milk chocolate products. These samples are all identical as far as the ingredients and composition are concerned, only the processing of the raw material of the milk portion is varied. The chocolate processing in the rolling, conching and finishing is also identical. They represent only differences in final product which are the result of the methods in handling the milk portion of the product.

At this point it might be advisable to consider what Whymper (9) has written some thirty years ago about this subject, I quote, "The addition of milk to chocolate, however, is clearly subject to infinite possibilities. It may be added as fresh milk to the sugar and the whole boiled down to a consistency suitable to be added to the cocoa mass. It may be added to the sugar or cocoa mass as condensed milk, or it may be mixed in with the chocolate mass as a powder. The number of patents on the subject is very large, and each manufacturer rightly or wrongly believes that his method of preparation is secret. If the product is good, the manufacturer's pride is not only justifiable, but admirable, but too often it is assumed that he is the possessor of a secret which he zealously guards." I think the latter situation has been the cause of many difficulties and misunderstandings in the confectionery industry about milk chocolate. In fact, I fear that at times the consumer has vacillated between the opinion that the manufacture of milk chocolate is a deep, dark, and devious secret carried on by mystics in white robes, and at other times that the whole thing is a deliberate hocus-pocus



Melanguer

Photo courtesy of Baker Perkins Ltd., Jabez Burns, Agents



Whole Milk Spray Drying Plant

Photo courtesy of Swenson Evaporator Div. of Whiting Corporation

cooked up by the manufacturer to simply discourage anyone from becoming familiar with the procedure, since no science, art, or even knowledge exists. In reality neither situation is true. The chocolate industry like every industry in this country has certain know-how and art, certain trade secrets which are extremely important, but by far and in large the general manufacture of high-quality chocolate products is based upon careful experimentation to develop acceptable products, and rigorous control to maintain the quality and flavor of the final product.

The Liquid Milk Process:

Let us consider the manufacture of chocolate from liquid milk reduced to dry form by the chocolate manufacturer in the presence of cocoa matter. Although the details of manufacture will vary in each individual plant, certain general characteristics are common to all processes handling liquid milk. This must necessarily be true, since from a scientific viewpoint, it is obvious that if milk is employed in chocolate it must sooner or later be reduced to dry solids. In the liquid milk process the raw milk is received from the farm, sampled, weighed, cooled, and stored in tanks. This equipment is identical to that which any dairy supplying you your morning bottle of milk might use. At this point, however, the process becomes somewhat unique. The milk removed from storage is then heated and pasteurized, and removed to a vacuum evaporator where sugar is added. The amount of sugar will vary with the individual process, 100 parts liquid milk and 25 parts sugar is a typical combination. It is then evaporated in a relatively high vacuum. The primary purpose for this is to remove the high percentage of water existing

(Continued on page 71)







candy packaging

What to Expect from a Corrugated Shipping Container Antioxidants in Candy and Candy Packaging Materials

NCA Exposition Plan

PUBLISHED BY

MANUFACTURING CONFECTIONER

JUNE, 1954

PROTECTED by Riegel



THE NEW NESTLE PACKAGE IS PRODUCED ON A BARTELT MACHINE FROM A WEB OF SPECIAL OPAQUE GLASSINE... HEAT-SEAL COATED AND GRAYURE-PRINTED BY RIEGEL.

More than 600 Riegel Papers are now proving their value for many of the nation's best-selling brands. It is the greatest variety of packaging papers available from any one source.

Somewhere among this wide selection you may find a better or more economical paper to protect your product. If we don't have just what you want, we can usually "tailor-make" a new paper to your specifications.

Write us now and tell us what you want paper to do for you. Riegel Paper Corporation, P. O. Box 170, Grand Central Station, New York 17, N. Y.

Tailor-made Packaging Papers



GLASSINES AND GREASEPROOFS

Plain • Waxed • Printed • Lacquer-Coated • Laminated

its Saran film

is Saran film ... added protection

Candy profits go up when you package for maximum protection and sales appeal in Saran Film bags!

Less chance for flavor and freshness to escape between your plant and the point-of-sale when you give them the added protection of saran film bags! Saran film's extremely low moisture transmission rate makes sure your candies will stay hard or soft . . . exactly as you pack them . . . and fresh to the last bite, because tough saran film bags don't go to pieces when they're opened. Add maximum protection to saran film's sparkling clarity and velvety

soft "feel appeal," and you have packaging that makes your product a sales standout. Printed or plain, capped or sealed, saran film bags build profits! Saran film bags are available from S. A. Bowie, Staten Island, N. Y. (converters of bags illustrated); Cello-Bag Company, Seattle, Wash.; Howard Plastics, Council Bluffs, Iowa; Union Plastic Films, Chicago, Ill. The DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales PL581G-1.

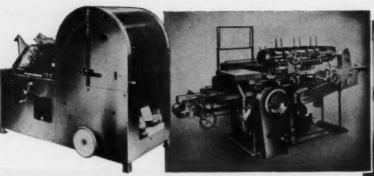


SEE SARAN-WRAP ON TV!

The same protective food wrap for household use. We're showing millions of homemakers every week how leading food brands rely on its protection. See it on Your Show of Shows... and on Today, starring Dave Garroway. NBC-TV.

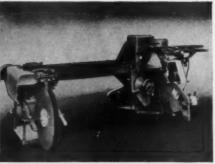
you can depend on DOW PLASTICS





Model PA Carton Former. Forms and glues cartons at speeds to 100 a minute. Uses inexpensive die-cut blanks. Easily adjusted for different sizes.

Model FA. Wraps up to 100 boxes or trays a minute in plain or printed cellophane. Can automatically apply price medallions and easy-opening tape. Quickly adjustable for various sizes.



Model DF-1. One of a number of bar wrapping machines in our line. Wraps regular or irregular-shaped bars at speeds to 140 a minute. Roll-card feed permits use of lighter board stock.

For more profitable production

Modernization pays off handsomely in lower costs and better products – when you modernize with the *right* machines.

"Package" offers you 40 years of experience to guide you in your planning — and the most modern and comprehensive line of equipment in the confectionery field.

For example, today's Hansella candy-making equipment—batch formers, rope sizers and cookers—embody new features that speed production, improve the quality of candy and cut costs to the bone ... Our Model PA and Tray-Lock machines enable you to make cartons and trays right in your own plant at great savings... Other "Package" and Forgrove machines cut and wrap candy at high speeds... Our fast FA machines overwrap boxes in plain or printed cellophane and are adjustable for a wide range of sizes... And for wrapping bar goods, you can choose from a number of specially designed machines—enabling you to get exactly the right model for your particular product.

We'll be glad to give you our recommendations - write or phone our nearest office.

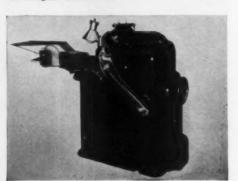


NEW YORK

PHILADELPHIA BOSTON CLEVELAND CHICAGO
DALLAS DENVER LOS ANGELES SAN FRANCISCO
SEATTLE TORONTO MEXICO, D.F.

Hansella Batch Former and Rope Sizer. Produces up to 40 pounds of perfectly formed and sized rope per minute. Speed and thickness of rope is adjustable. For filled or unfilled, single color or striped candy.





by

pri

to

Ex

kne

no

las

po

ab

pe pu

bo

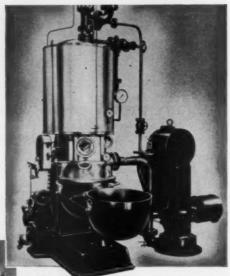
pu

CO

w

to

High-speed Forgrove Model 22-B. Hopper feed enables this machine to twist wrap up to 200 pieces of hard candy a minute. Adaptable to cellophane, waxed paper, reinforced foil.



Hansella Continuous Vacuum Cooker Model 18-C. Permits use of either the continuous-vacuum cooking process or batch-vacuum cooking process. Controls exact size of batch. Replaces filled kettle with empty kettle, applies vacuum and fills. Seals intermediate chamber while changing kettles. Guarantees batch uniformity.

See us at the Confectionery Show - Booth 301, Conrad Hilton Hotel, June 7-10

What to Expect from a

Corrugated Shipping Container

by CHARLES H. CARPENTER, Vice President, Kieckhefer Co.

When I happily accepted the privilege six months ago to talk to you on the subject "What to Expect From A Corrugated Box," had no qualms whatsoever, knowing that the subject was so tremendous in scope that I could not miss. When it came to the last minute, I realized that every possible phase of the subject of corrugated boxes was written about almost every day in the week by laboratory men, technical experts, trade paper engineers and purchasing agents. So instead of becoming too technical, I will point out a few reasons why I can truthfully say that one thing you can surely expect from a corrugated box is a lot for your money.

We salesmen often blame the purchasing agent for expecting a lot for his money, but everyone in all departments is equally interested. Sales wants high quality and low cost, just as production insists upon it and management demands it.

I started selling solid fibre and corrugated boxes 32 years ago when there were lots of wooden boxes being used, and we made them too. Today wooden boxes have been replaced by corrugated

boxes for most items because the wooden boxes cost two or three times as much, they weigh two or three times as much, and it costs two or three times as much to handle them through the plant.

First came the solid fibre container to replace the wooden box, as many of you will remember and solid fibre is still being used for special purposes where it is necessary, but the improved corrugated boxes have supplanted solid fibre for general usage, at lighter weight, lower cost and more for your money.

A smart production man realizes that the cost of a corrugated box is not only its original cost per thousand pieces, but on the other hand it is the original cost plus the handling into the plant, to the filling machines, through the boxing machines, into the warehouses, into the trucks or cars to the customer, carrying the product safely to destination.

Let us explore a few of these steps which can help to keep your costs down. If your factory layout permits you to have your boxes delivered in a unit load of 2,000 boxes in one large bale which can be picked up by your forked lift truck in one package and taken to your filling department in one motion as compared with handling 100 bundles tied with twine holding 20 boxes, you have saved very important time and labor and money.

These bales require no wooden pallets or spacers which take up valuable room but only a sheet of corrugated board top and bottom plus flat band strapping to hold the boxes compact. The boxes in units of 25 or 30, untied, are arranged in patterns depending upon the size of the box, interlocked so that a bale is made for railroad shipments one half the width of the car and one half the heighth so they can be tiered two high. The truck shipment bales are made one half or full width of the truck wide and full height of the truck high. These bales can be handled by the ordinary forked lift truck whose forks have been sharpened to some degree.

The development of unit loads has gone far in our industry, and you can expect corrugated boxes to be delivered this way by the right suppliers. The next step is to secure containers which go through your box machines without trouble and if you can find boxes which will go through without stoppages throughout the day, you have again saved important money.

Where can you expect to find

such shipping cases?

We have just listened to a splendid talk on the subject of Quality Control in the Candy Business, and you should expect your container supplier to have a Quality Control program established in his plant.

Representatives of this department should report to top management, not to the production department. The Quality Control inspectors should assume the role of customers representatives, your representatives. First of all, alert box manufacturers know that the grades of container board they use must adhere to standards covering finish, Mullen test, moisture, caliper, bending quality, tear strength, rigidity, printability, scuff proof-

ness, water proofness, color, pulp formation, etc. Companies who have their own pulp and paperboard mills have a double check on this type of Quality Control, and their plants work together in perfecting improvements. die

tir be

di

tif

TI

cu

H

di

be

Ol

at

fa

It is also equally important that complete inspection be made on other important ingredients of the box, namely adhesives, tape, stitching wire, printing inks, twine, etc. Each of these is a study in itself. So much for Quality Control of materials.

I think it worthwhile to enlarge a little on proper Quality Control of production in a modern corrugated box shop. First, the operator of the corrugator must be on his toes because the quality control man is looking for 18 different items which he may pass or complain about. Liners must be faced properly, there should be no excessive pressure roll markings, finger lines should neither be dirty, cutting, missing or too wide. The height of the flutes must be kept uniform, no sheets may be warped, there must be no cutting of the corrugations, the caliper of the board must be up to standard, the adhesion on the single face and on the double face must be proper, the board must neither be too soft nor too brittle, the components must be in line and the facings must not be wrinkled. The slitter man must be sure that his scoring dimensions are correct, that the scores are in alignment, that the scores are not too light, the scores are not cutting, that the creasing wheels are in good condition. The slitting must not be ragged, no dull or chipped knives must be used, there must be no buckling at the take off and the sheets must be cut accurately and cleanly.

The printing department operators must be sure that there is a proper setting of the kicker feeds or hopper feed, that the entrance pull rolls are not too tight or tight enough, that the slotting, creasing and cut outs are accurately set up, that the stitched or gluelap joint is correctly set and of course that the printing copy is accurately located.

There must be no excessive crushing by the entrance feed rolls or the pull rolls or the printing



Problem:

Solution:

Champion BAG COMPANY An Illinois company * recently put through an emergency call to Champion when their main supplier for printed roll stock was unable to meet an important delivery date.

Champion printed and delivered the urgently needed cellophane stock in less than one week's time, adding more proof to the old saying that "it's the mark of a Champion to deliver under pressure."

Moral: If tight production schedules get you in a trap or if you're plagued with perplexing packaging problems, check with Champion. Twenty-five Champion Packaging Specialists coast-to-coast will offer experienced help on design, production or other phases of the packaging field. Contact them, or write or call us today.

*Name on request.

160 NORTH LOOMIS STREET, CHICAGO 7, ILLINOIS

Converters of Cellophane and Glassine Printed Rolls and Bags

dies. The trimming and the slotting and the cut outs must not be ragged.

There cannot be improper printing and registration. Ink colors, ink distribution, the box makers certificate and dating must be correct. The panel dimensions must be accurate and the operator must be sure that the net sheet size is exact. He must look out for dirty printing dies and be sure that the vertical scoring is not light or not cracked.

When you receive a well made box, you can see from what I have outlined at length just how much attention has been given to manufacturing that box correctly.

The Quality Control Department of course follows up on the finished containers with laboratory tests, the most important of which for your products are top, end and side compression tests. Flat crush tests on both printed and unprinted surfaces of the combined board are made continuously throughout the day, as constant vigilance encouraging high quality is kept. I will not attempt to touch on laboratory procedures, because it is too long a story to mention.

One of the most important things that has taken place in your industry, as well as in most others, has been the development of improved, more efficient, faster automatic wrapping and boxing machines. These machines demand shipping cases one after another which are exact duplicates. To reach production perfection, all boxes must be the same, each a perfect box and made with absolute uniformity. Accepting this challenge, one of the greatest advancements that has been accomplished in years is the development and production of machines manufacturing glued joint Ouad-Lok boxes. I am taking the liberty of telling you about it, throwing modesty to the four winds, because it is part of the subject on which I am speaking.

As stated before, this machine creates the most uniform and most nearly perfect container that we have ever been able to make. The Quad-Lok construction provides for a glued manufacturers joint which is 1/3 stronger than stitched or taped containers. The joint is





neat and trim and there is no unsightly tape or metal stitches to detract from goodlooking advertising on the box, or no stitches to scratch the labels or mar the contents. The Quad-Lok tab helps funnel your product into the case. First the Quad-Lok machine cuts slots and adds the right angle vertical creases and trims out the Ouad-Lok flap, then the machine irons out the Quad-Lok flap and the corresponding surface on what would be the adjoining panel to provide single thickness at the closure. It then applies waterproof glue to the flaps and folds one side and one end panel immediately after the creasing and gluing steps. The box flows through the machine and before the glue is fully set, the box is squared to a rectangle that will open and fold to a true rectangular solid. It also has a device to true up the vertical crease on each fold to make sure it will form a right angle with the edge. This continuous operation with its various squaring devices makes boxes which are much more uniform, one after the other, than have been produced before. This is another thing you can expect from a corrugated box when you expect to get a lot for your money.

Another thing you can expect a corrugated box to do is to help you make sales. The shipping case has been often named a travelling billboard because it is seen on the street, on trucks, on the railroad platforms and in the stores, and it is worthwhile stressing the point here that the printing of a travelling billboard should be readable across the street. Some people make the mistake of putting too much copy on their boxes, forget-







"SHOW manship SELLS for you!













Milprint Milprint

THIS INSERT LITHOGRAPHED BY MILPRINT, INC.

LITHOGRAPHED WINDOW CARTONS

Got a product that looks good enough to eat? Then show it—and sell it—with Milprint lithographed window cartons! Milprint window cartons showcase your product behind a sparkling Cellophane or acetate window... surround it with rich color and attractive precision printing... furnish the compelling eye-appeal that turns more prospects into purchasers!

Call on Milprint for all your lithography, packaging, displays or printed promotional material. And remember Milprint, the company that *originated* the window carton, offers the widest variety of packaging materials and

printing processes available anywhere.

Want packaging and displays that show 'em and sell 'em?

Call your Milprint man-first!



GENERAL OFFICES, MILWAUKEE, WISCONSIN SALES OFFICES IN PRINCIPAL CITIES

Printed Cellophane, Pliofilm, Polyethylene, Saran, Acetate, Glassine, Foils, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material



New York office: 55 West 42nd St.

ting that the advertised name be it Campbell or Carnation or Hershey or Welsh or Wrigley's, must stand out prominently and be seen at a glance across the street. You can expect your container supplier to help your advertising department with this problem.

Another way that you can expect a corrugated container to help your sales is in the use of shipper displays. These containers, which serve as a shipping case, may be printed on the inside so that they may be formed into a counter display, have been used effectively by many industries to promote sales.

Another sales gadget, if you please, is the Easy Opening container. One of these is the Pull-Tab. This particular box is manufactured with the inside liner cut prior to the combining operation without harming the corrugating medium or the outside facing. No extra materials are required such as tape or string or wire, so that the extra cost is kept to a minimum. This provides for a quick easy opening, tearing the box around the entire container, leaving the contents unharmed, which is often not the case when cutting knives or wedges are used. This provides for easy pricing and gives easy access to the contents. These trays make it possible to display the product easily and the half box gives you a handy carry out for use in stores. This can help you sell your product.

I hope I have given you some new thoughts as to what you can expect from a corrugated box. We are proud of the advancements that have been made.

-the end

Sy

pe

of

di

sh

to

C

b

NAME MARKERS PRICERS

Gummed Tape Printers For The Candy Industry

Write for information

KIWI CODERS CORP. 3804-06 N. Clark St., Chicago 13, III.

Antioxidants in Candy and Candy Packaging Materials

by Dr. B. N. Stuckey, Food Antioxidant Section, Eastman Chemical Products, Inc.

KANCIDITY has long been a problem in the food industry. Various methods have been tried to combat this deterioration such as refrigeration, improved methods of food preparation, different methods of wrapping and packaging, and more recently, the use of food-approved additives from natural as well as synthetic sources. The food additives were not too successful in many cases, because of instability to processing temperatures, until the advent of butylated hydroxyanisole, hereafter referred to as BHA. This antioxidant, as well as similar hindered phenol compounds, was found to retain its ability to inhibit oxidation at temperatures well in excess of those used in food processing. It has been accepted by the fat and oil industry to a point where a large percentage of edible fats are now stabilized with butylated hydroxyanisole during processing as a matter of course.

Candies, particularly those containing animal fat shortening, butter, and various nuts, have been found to have a relatively short shelf life. The U. S. Department of Agriculture, in cooperation with the National Confectioners Association (1) reports a definite increase in the storage life of cream fondants with butter and animal fats and fudge with animal fats through the use of antioxidants. Cecil and Woodroof (3) used BHA alone and BHA with propyl gallate and citric acid as synergists for increasing the shelf life of salted pecans, salted peanuts and peanut butter. They found that they could increase the shelf life of salted nuts up to 133 per cent when the antioxidant was used in both the cooking oil and the salt. Shelf life of peanut butter, after the jars were opened,

was increased by 33 per cent. They reported that in all the tests the antioxidants used extended the period of storage life before natural fresh aroma and flavor began to fade out.

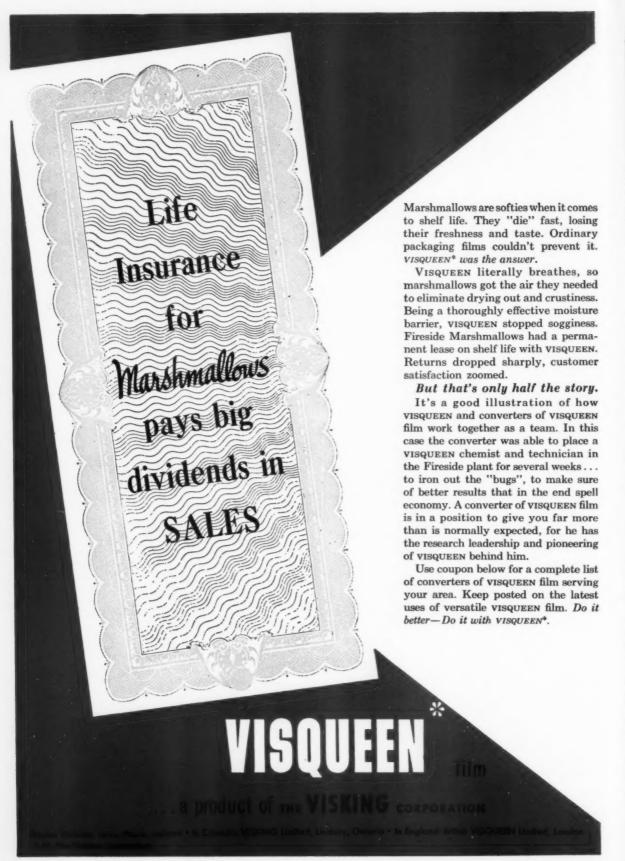
The type of packaging used for fatty foods has long been known to have a direct bearing on the keeping quality of the food itself. Most packaging materials used today contain trace quantities of metals which act as catalysts to promote oxidation in the food contacting the package. In addition, many packaging materials absorb a portion of the fat, and the absorbed portion is more susceptible to oxidation due to greater aeration as well as the catalytic action of the metals in the paper. It has been demonstrated that often a customer complaint on rancidity in food products can be traced to rancidity of fat in the package while the food itself still retains its normal odor and flavor. Bentz (2) has shown that, when using accelerated tests, both animal and vegetable oils stored in papers coated with butylated hydroxyanisole had much greater shelf life than the same materials stored in uncoated papers.

The present paper reports the findings of the Foods Laboratory of Eastman Chemical Products, Inc., on the effect of treating various candies as well as the packaging material with antioxidants.

EXPERIMENTAL

Previous experience had shown that when testing materials of this type, no objective chemical method for measuring rancidity which would be correlated

(Continued on page 50)



IMPORTANT! VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. VISQUEEN film is produced by process of U. S. Patents No. 2461975 and 2632206. Only VISQUEEN has the benefit of research and technical experience of The VISKING Corporation, pioneers in the development of pure polyethylene film.

Fireside Freamy WHIP MARSHMALLOWS

THE VISKING CORPORATION, BOX MC6-1410 Plastics Division, Terre Haute, Indiana

Please send names of converters of VISQUEEN film serving my area.

Name.....

Company......Title....

Address

City...... Zone.... State.....

(Continued from page 47)

with off odors and flavors was available. Since an experienced taste panel was available it was decided to evaluate all samples organoleptically. No sample was discarded until all three panel members agreed on its rancidity.

Since earlier work had reported on the use of antioxidants in candies containing various animal and vegetable fats, it was decided to limit these data to candies containing nuts and nut products. The paper used for wrapping the various candies and for packaging the nuts was commercial glassine waxed with 100% paraffin wax. The treated glassine was taken from the same batch of paper, but the paraffin used for waxing had been stabilized with BHA so the finished waxed glassine would contain .05% BHA based on the weight of the wax plus paper.

The nuts used in this experiment were stabilized as follows:

1. A synergistic mixture containing 14% BHA, 6% propyl gallate and 3% citric acid (known commercially as TENOX III and referred to hereafter as TENOX III) was dissolved in alcohol and sprayed on the nuts to be treated. The concentration of the TENOX III-alcohol solution was varied with the pickup of each type of nut so that a uniform concentration of TENOX III was obtained on each batch. The control batches were sprayed with plain alcohol.

2. An emulsion of BHA and a water solution of propyl gallate were prepared and sprayed on the nuts as described above. Water was sprayed on the control batches. All batches were allowed to air dry before being used in the preparation of candy.

The peanut oil used in frying the almonds for the chocolate-almond candy was stabilized by dissolving BHA pellets in the hot oil just before use.

All the candies reported, except the Aplets, were prepared on a small scale in the laboratory. The experiments on Aplets were done in cooperation with the Liberty Orchards Company of Cashmere, Washington. The Liberty Orchards Company forwarded shelled walnuts to Kingsport, Tennessee. A part of the shelled walnuts were treated with BHA and all walnuts returned to Cashmere, Washington. They were made into Aplets there and a part of the candy bars were returned to Kingsport for evaluation.

The laboratory candies were prepared as follows: Peanut Brittle: Two experiments were carried out on this candy. In the first, shelled Spanish peanuts were oven roasted and then treated with the antioxidant. The roasted peanuts were added to the candy batch at 295° F with the butter and soda. In the second experiment the raw peanuts were treated with the antioxidant. The stabilized raw peanuts were added to the candy when the batch had reached 236° F and were therefore cooked with the candy. A standard peanut brittle formula containing sugar, corn syrup, water, salt, butter and soda was used in both cases.

Pecan Roll: Shelled pecans were obtained from Langford & Taylor of Meansville, Georgia. The pecans were stabilized and chopped into approximately 1/8-inch pieces. They were then used in a standard pecan

roll formula containing granulated sugar, brown sugar, corn syrup and evaporated milk.

Walnut Sea Foam: Shelled walnuts were obtained from the California Walnut Growers Association, Los Angeles, California. The walnuts were stabilized and chopped into approximately 1/8-inch pieces. They were then used in a standard walnut sea foam formula containing light brown sugar, water, vinegar, egg whites and vanilla.

Chocolate-Almond Candy: Shelled almonds were obtained from the California Almond Growers Exchange, Sacramento, California. A part of the almonds were deep fried in unstabilized peanut oil. The remainder were fried in peanut oil stabilized with .02 per cent BHA. The almonds fried in stabilized oil were analyzed and found to contain an average of .006 per cent BHA. Half of each of the above portions was treated with BHA. Commercial coating chocolate was softened by heat to a point where the almonds could be well mixed into it and after mixing in the nuts, allowed to harden.

All candies except the Aplets were cut into approximately 1-inch squares and a portion was wrapped in treated paper with the remainder in untreated paper. The Aplets were packed as individual bars and wrapped in commercial packaging which was not treated with an antioxidant. All samples except the chocolate-almond candy were stored at 76° F and 145° F. The chocolate-almond candy, because of the softening effect of the higher temperatures, was stored at 76° F and 86° F. The Aplet bars were also stored at 34° F to note the effect of refrigerated storage on the antioxidants being tested. All samples were examined biweekly by the Organoleptic Panel.

An additional experiment on the use of antioxidants in Clark bars was done in cooperation with the Clark Candy Company of Pittsburgh, Pennsylvania, in hopes that it could be reported with this paper. This experiment was still in progress when this paper was written; so the data must be reported later.

RESULTS

In testing rancidity in foods such as pastries, candies, crackers, etc., quite often one lot or batch will be entirely out of line when compared with the remaining data. It is believed that this could be due to variable raw ingredients, metal contamination, or other errors which arise in this type of experiment regardless of the care taken in setting up the work. For this reason it is better to run duplicate experiments when possible or draw conclusions from the trend of all the data. Due to limited time it was impossible to duplicate all the data given herein. Conclusions on these data will be drawn from the general trend of all experiments rather than from any specific lots.

Table 1 shows the storage life of Aplets when stored at 145° F., 76° F. and 34° F. None of the packaging material had been treated with antioxidants. These data indicate that spraying the walnuts with .03 per cent BHA increases the storage life of Aplets regardless of the storage temperature used in testing the candy bars.



your target,

whether you are shooting at

Mrs. Housewife, Dad or

Junior, is no easy mark.

Products must sell themselves
in Self Service markets, and that
job must be done by the wrap.

DANIELS wraps are

designed and printed

with that in mind, and

our customers find that our aim is good!



There is a **DANNELS** product to fit your needs for candy wraps, in sheets and rolls . . . glassine, plain and embossed * sylvania cellophane, metallic fails * laminated papers * special "Heat-Seal" papers.

PREFERRED PACKAGING SERVICE

SALES OFFICES: Rhinelander, Wisconsin Chicago, Illinois . . Philadelphia, Pennsylvanla . . Akron, Ohio Denver, Colorado . . Dallas, Texas . . Los Angeles, California

creators · designers · multicolor printers

Table 2 shows the storage life of peanut brittle in which the nuts are dry roasted and then treated with the antioxidant. It can be seen from this table that all treatments except the .01 per cent propyl gallate treatment of the nuts gave a definite increase of storage life to the peanut brittle at 76° F. The propyl gallate apparently was not equal to BHA or TENOX III in this experiment. In general the treated paper gave added storage life to the candy regardless of pretreatment.

T.	- 1	а.	_	1
	ar	114	100	

TREATMENT

.03 Per Cent BHA 28

STORAGE	LIFE	OF	AP	LETS		
				LIFE IN DAYS		
		145°	F.	76° F.	34°	F
				07	20	

994

Table 2

STORAGE LIFE OF PEANUT BRITTLE EXPERIMENT 1

LIZEL LILU	TANKENT A W			
TREATMENT			LIFE IN	DAYS
NUTS	PAPER		145° F.	76° F.
Control				
.07 Per Cent TENOX III	. Control		. 27	136
.01 Per Cent BHA	. Control		. 29	124
.01 Per Cent Propyl Gallate	. Control		. 23	37
Control				72
.07 Per Cent TENOX III	05 Per	Cent BH	A 32	143
.01 Per Cent BHA				124
.01 Per Cent Propyl Gallate	05 Per	Cent BH	A 35	135

Table 3

STORAGE LIFE OF PEANUT BRITTLE EXPERIMENT 2

TREATMENT			LIFE IN	DAYS
NUTS				
Control				
.07 Per Cent TENOX III	. Control		. 25	90 +
.01 Per Cent BHA	. Control		. 19	40
.01 Per Cent Propyl Gallate	. Control		. 20	41
Control	05 Per	Cent BH	A 16	48
.07 Per Cent TENOX III	05 Per	Cent BH.	A 25	90
.01 Per Cent BHA	05 Per	Cent BH	A 26	78
.01 Per Cent Propyl Gallate	05 Per	Cent BH	A 30	83
**				

Table 4

STORAGE LIFE OF PECAN ROLL

TREATMENT		I	JFE IN	DAYS
NUTS	PAPER			
Control	Control		29	43
.07 Per Cent TENOX III				
.01 Per Cent BHA	Control		62	80+
.01 Per Cent Propyl Gallate	Control		36	55
Control				80+
.07 Per Cent TENOX III	.05 Per Cent	BHA	45	80+
.01 Per Cent BHA				80+
.01 Per Cent Propyl Gallate				80+

Table 5

STORAGE LIFE OF WALNUT SEA FOAM

TREATMENT			1	LIFE IN	DAYS
NUTS	PAPER		14	15° F.	76° F.
Control	Control			6	23
.07 Per Cent TENOX III	Control			6	80+
.01 Per Cent BHA	Control			16	80+
.01 Per Cent Propyl Gallate	Control			6	27
Control					80+
.07 Per Cent TENOX III	.05 Per	Cent	BHA	16	80+
.01 Per Cent BHA	.05 Per	Cent	BHA	16	80+
.01 Per Cent Propyl Gallate	.05 Per	Cent	BHA	16	80 +

Table 6

STORAGE LIFE OF CHOCOLATE-ALMOND CANDY

TREATMENT			LIFE IN	DAYS
OIL	NUTS	PAPER	86° F.	76° F.
Control	Control	Control	42	46
.02% BHA	Control	Control	46	118
Control	01% BHA	Control	129 +	129+
Control	Control	05% BHA	129+	97
.02% BHA	01% BHA	Control	118	129+
Control	01% BHA	05% BHA	129+	129+
.02% BHA	Control	05% BHA	94	104
.02% BHA .	01% BHA	05% BHA	129+	129+

Table 3 shows the storage life of peanut brittle in which the raw nuts were stabilized and then cooked with the brittle to determine the carry-through properties of the antioxidants. These data are similar to those given on Table 2 although most of the lots which were treated before cooking did not remain stable as long as those in which the nuts were roasted and then stabilized. Again propyl gallate would not be considered a satisfactory antioxidant, and better average stability was obtained when both the nuts and package were stabilized. In both of these peanut brittle experiments it should be pointed out that the synergistic mixture TENOX III gives better stability than the BHA alone. This would be expected since this mixture gives better stability to most products than any of the ingredients alone.

It may be seen from Table 4 that pecan rolls can also be stabilized by either TENOX III or BHA. Again the propyl gallate alone would not be considered too effective, and the treatment of the package

increased the over-all stability.

In Table 5 similar results are shown with walnuts in sea foam although the 145° F. storage data were somewhat erratic. It has been found that, although the lower temperature storages take considerably more time for the completion of an experiment, the data are usually more consistent than the higher temperature tests.

Table 6 shows the effect of stabilizing the oil and nuts, as well as the package, in preparation of chocolate-almond candy. It may be seen that the best stability is given by the treatment of the nuts and/or the package. The treatment of the oil alone gives a definite increase in stability, but it is not generally as good as the treatment of the other two.

SUMMARY

The following conclusions can be drawn from these data:

- Rancidity in nut candies containing walnuts, peanuts, pecans, and almonds can be inhibited by the use of phenolic-type food grade antioxidants.
- The best over-all stability was obtained by treating the nuts with a synergistic mixture such as TENOX III and the package with .05 per cent BHA.
- Treating the nuts alone with either BHA or TENOX III gave almost equal stability to the above combination.
- BHA in the oil used in frying almonds gave increased shelf life but was not equal to the above treatments.
- Propyl gallate when combined with BHA (TENOX III) gave excellent results. When used alone it would not be considered satisfactory for this application.

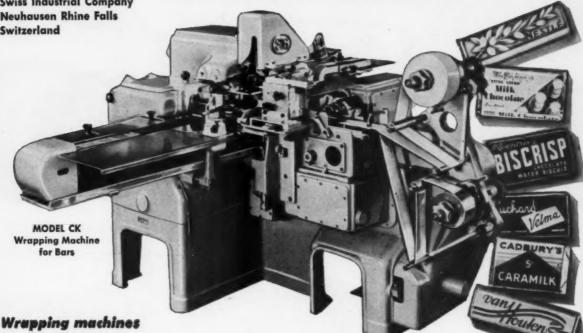
REFERENCES

- "Antioxidants" Research Summary No. 1, January, 1953:
 U. S. Department of Agriculture in Cooperation with The National Confectioners Association.
- Bentz, R. W. "Antioxidants for Food Papers." Modern Packaging, Vol. 27 (September, 1953), 141-143.
- 3. Cecil, S. R. and Woodroof, J. G. "Butylated Hydroxyanisole as an Antioxidant for Salted Peanuts, Salted Pecans and Peanut Butter." Georgia Experiment Station Bulletin No. 265, January, 1951.

the modern answer to all problems of high speed

CANDY WRAPPING

Manufactured by **Swiss Industrial Company Neuhausen Rhine Falls** Switzerland



for:

Chocolate bars Chocolate tablets **Assorted chocolates**

Chocolate sweets Fruit bonbons Drops Mints Cookies Ice cream Butter

Wafers **Bouillon** cubes Soup products etc.

More efficient - more versatile - more economical - more reliable, the famous SIG line offers the finest available machines for your candy wrapping operation. The well-known Model CK is typical of SIG advanced design and superior construction, capable of handling a wide range of sizes. Outstanding features of the type CK include an effective output of 160 1/3 oz. to 3 oz. bars per minute of uninterrupted work of the machine, steplessly variable speed, flat washable stainless steel feed chain, and simultaneous feeding of a number of bars right side up. An easily accessible label magazine, needing recharging but 3 times per hour, offers additional advantages along with easy and quick changeover, automatic oil spray lubrication, optimum accident prevention, overload protection, and short cleaning time. If desired, the machine can also be supplied for label feed from roll. Only two operators are required for the CK-one to feed and one to remove the finished packages. SIG machines will cut your packaging costs. Write today for complete information.

Available in the United States Solely Through

KES & SMIT SUMMERDALE AVE., PHILADELPHIA 24. PA.

acific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534 - 23rd AVE., OAKLAND 6, CALIF



SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

AYS TO CELEBRATE-

* CHRISTMAS



3501 - Santa



3503-Sleigh Scene



3508 - Holiday



3504 - Snow Scene



3512-Merry Christmas

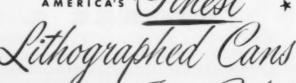


3505-Winter Scene



3514 - Evergreens







We will help you fill your own Christmas sock with as much sales volume as your plant can handle if you start planning now.

All types of candies, fruit cake, cookies, dried fruits, nuts, cheese, assorted delicacies, and specialty food products sell like mad when packed in our Christmas and winter season decorated stock cans. We also custom design.



3513-Noel



3511 — Poinsettia



3510 Custom Design (Square or Oblong)

JOIN OUR CHRISTMAS CLUB NOW

Fill in information and we will quote and give color selections. Call us when in Chicago—SEeley 3-3666.

Product

Weight or size to be packed____

Quantity of Cans___

Approx. Delivery____

Name____

Firm____Address_

Phone.

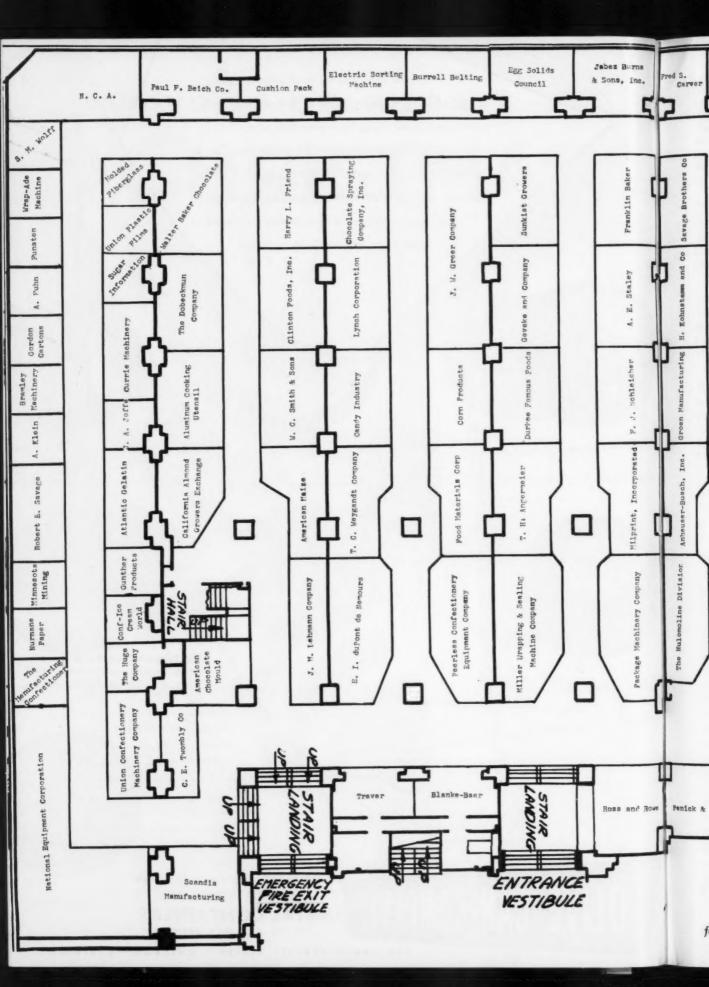
OLIVE CAN COMPANY

DESIGNERS AND MANUFACTURERS
PLAIN AND LITHOGRAPHED

METAL CONTAINERS

CUSTOM OR STOCK DESIGNS

450 NORTH LEAVITT STREET . CHICAGO 12, ILLINOIS



Setter Triangle 00 Lamborn pue Union Sales Belting Vons H Brezil Nut Quincy Paper Bo Hooton George H. Sweetnam Inc Anheuser-Busch. Stange Vacuum Candy fecti ternations Machinery Confectioners The Hubinger The Confections Penick & Ford

Directory of Exhibitors

Confectionery Industries
Exposition—June 7-10, 1954
Conrad Hilton Hotel, Chicago

THE ALUMINUM COOKING UTENSIL CO., New Kensington, Pennsylvania. Booth 508.

AMERICAN CHOCOLATE MOULD CO., INC., 173 Lafayette Street, New York 13, New York. Booth 510. Moulds for chocolate and candy bars, continental chocolates, Easter hollow goods, Christmas, all holidays and special occasions, and chocolate coating pans. In attendance: Sam Friedwald, George Friedwald, M. Prensky, Jerome Prensky, Herbert Friedwald.

AMERICAN MAIZE-PRODUCTS COMPANY, 100 E. 42nd Street, New York 17, New York Booth 502. Corn syrup, corn syrup solids, corn starch, moulding starch and lactic acid. In attendance: Messrs. T. Sander, Jr., J. B. Melick, C. H. Sanford, Jr., R. L. Lloyd, F. C. Frey, H. J. Hammer, J. B. Brouwer, N. W. Harris, R. R. Pelo, T. P. Shea, J. J. Binder, E. R. Sterbenc, J. C. Crumley, A. J. Davis, D. O. Watkins.

T. H. ANGERMEIER AND COMPANY, 245 7th Avenue, New York 1, New York. Booth 309. Modified pectin, veg-a-loid, modified egg albumen, pro-tan, pure fruit flavor. In attendance: Herbert F. Angermeier, Wilbur E. Angermeier and Frank M. McIntire.

ANHEUSER-BUSCH, INC., 721 Pestalozzi St., St. Louis 18, Missouri. Booth 209. Corn syrup, moulding and thin boiling starches. In attendance: Arthur E. Weber, Tate M. Robertson, Jr., Richard F. Amacher, Harold E. Bush, Willis J. Simms, Harry A. Best, Jr., Frank V. Voyda, Arthur F. Moeslein, R. T. Regan.

ARMOUR AND COMPANY, Union Stock Yards, Chicago 9, Illinois. Booth 4.

ATLANTIC GELATIN, Div. General Foods Corporation, Hill Street, Woburn, Massachusetts. Booth 41. Gelatin—all grades and all types. In attendance: J. H. Cohen, J. A. Dunn, A. Tole, O. W. Johnson, N. Vance, Jr., W. Touhy.

ATLAS POWDER COMPANY, Wilmington 99, Delaware. Booth 101. Sorbitol, food emulsifiers. In attendance: Carl D. Pratt, W. W. Hays, Peter Hull, Howard Dellard, J. A. Gilruth, Norman Kennedy, Sherwood Cross.

FRANKLIN BAKER DIVISION, General Foods Corporation, 15th & Bloomfield Sts., Hoboken, New Jersey. Booth 305. Coconut products. In attendance: Charles W. Rehor, Harry T. Easton, Harry P. Haldt, Graham T. Brown, George W. McCullum, David E. Miller, John I. MacDonald, Alan J. Post, Wesley L. Bonney, A. Frank Lilien, Milton E. Barker, Arthur E. Olson, David H. Macaulay.

WALTER BAKER CHOCOLATE & COCOA, Division General Foods Corp., Pierce Square, Dorchester 24, Mass. Booth 506. Cocoa, chocolate, cocoa butter, confectioners coatings. In attendance: C. Spiller, D. E. Hegarty, F. A. Sullivan, T. G. Churchill, R. G. Schnyer, A. B. Markhard, W. A. Medlicott, J. A. Buzzard, D. E. Pierce, A. E. Fest, C. R. Phoenix, H. W. Thomas, J. P. Gray, L. R. Clark, B. B. Hirsch, W. S. Toohey, E. Weber, O. W. Johnson, W. A. Pence, R. R. Robertson, G. E. Sutter, Jr., G. Gray Simpson, Jr., W. F. Ison, Sr., C. M. Crider.

BLANKE-BAER EXTRACT & PRES. CO., 3224-3234 South Kingshighway, St. Louis 9, Missouri. Booth 513. Cordial dipping fruits, fruits and fruit purees for cream center chocolates, extracts, flavors and colors. In attendance: Dr. Samuel H. Baer, Miller, Winston, A. H. Knese, C. R. Klofkorn, Harry L. Johnson, Paul H. Semrad.

BRAMLEY MACHINERY CORPORATION, 880 River Road, Edgewater, New Jersey. Booth 25. Bramley mill. In attendance: B. M. Halpern, M. Luhne, L. A. Thomson, W. R. Webster, Jr.

JABEZ BURNS & SONS, INC., 600 West 43rd St., New York 36, New York. Booth 15. Chocolate Molds. In attendance: J. L. Robinson, D. B. Spence, C. C. Mosier, C. A. Anderson.

BURRELL BELTING COMPANY, 7501 N. St. Louis Ave., Skokie, Illinois. Booth 16. Products Manufactured: Burrell Reflecto Cooling Tunnel Belting and Burrell Super Gloss Cooling Tunnel Belting, the newest items of our manufacture, will be the central feature of our display. Other items to be displayed will be Burrell Endless Cooling Table Belts, Burrell Endless Feed Table Belts, Burrell Caramel Cutter Boards, various types of Conveyor Belting and the various treatments applied to belting will also occupy a prominent place in our display. In attendance: E. F. Mayer, J. M. Moyer, Howard Aylesworth, Jack Taylor, Howard

Gage, James Linn, H. B. Fate, Nick Schausten, Harry Hallgren and A. J. Pusateri.

Gli

Illi

eni

ene

try

E.

Nic

W.

Wi

an

B.

J.

Cr

41

Bo

pn

tei

W

Va

co

E.

Je

Os

Bl

pe an

fe

cl

m

A

ta

H

B

0

o:

CALIFORNIA ALMOND GROWERS EX-CHANGE, P. O. Box 1768, Sacramento 8, California. Booth 509. Blue Diamond Almonds. In attendance: Dale Morrison, Jack Axer, J. R. Hanna, Charles H. Muller, Robert K. Clement, Dick Hobson.

CANDY INDUSTRY, 220 East 42nd St., New York 17, N. Y. Booth 408.

FRED S. CARVER, INC., One Chatham Road, Summit, New Jersey. Booth 14. Carver cocoa presses, Carver Laboratory presses. In attendance: William S. Carver, Robert W. Carver.

CHOCOLATE SPRAYING COMPANY, INC., 2035-39 West Grand Ave., Chicago, Illinois. Booth 406. Continuous die pop machine with wrapping attachment. Chocolate decorator. In attendance: Leo Latini, John Latini, Edmond Latini, John Sheffman, Gilbert Holmberg.

CLINTON FOODS, INC., Corn Processing Division, Clinton, Iowa. Booth 504. Products from corn. In attendance: E. C. Alderson, H. A. Bendixen, L. D. Buhrer, E. D. Cottral, M. H. Eddington, George Heath, Wm. Hoaster, W. F. Jackson, A. C. Junge, R. E. Mikkelsen, Tage Miller, R. C. Rau, Lloyd H. Smith, R. C. Wagner.

THE CONFECTIONER, 625 No. Milwaukee, Milwaukee 2, Wisc. Booth A.

CONFECTIONERS JOURNAL, 437 Chestnut St., Philadelphia, Pa. Booth 102.

CONFECTIONERY-ICE CREAM WORLD, 99 Hudson St., New York 13, N. Y. Booth 39.

CORN PRODUCTS SALES COMPANY, 17 Battery Place, New York 4, New York. Booth 403. Corn Syrups, corn starches, and dextrose. In attendance: Messrs. W. H. Gamble, R. R. Adam, E. W. Schmitt, J. R. Krno, F. E. Von Bargen, H. V. P. Francis, J. Mark Coe, M. D. Mullin, W. S. Winter, J. E. Walz, S. W. Roberts, H. J. Heinstadt, G. W. Mathews, Jr.

CURRIE MACHINERY COMPANY, 1150 Walsh Avenue, Santa Clara, California. Booths 43 and 44. Stackers, feeders, cleaners, moulding machines, trucks, dollies, truck casters and truck wheels. In attendance: Don M. Currie, H. W. Currie, D. W. Currie, J. C. Decker, F. Conway.

CUSHION PACK, INC., 150 Fifth Avenue, Hawthorne, New Jersey. Booth 610. Decorative and protective padding, greaseproof glassine liners. In attendance: M. J. Schmitt, V. S. Mazur.

THE DOBECKMUM CO., P. O. Box 6417, Cleveland, Ohio. Booth 507. Flexible packaging materials for candy packaging. In attendance: M. E. Shank, R. S. Jones, W. L. Lenox, Bill Bader, Bob Schultz, Bob Smith, Bob Gilbert.

DURKEE FAMOUS FOODS, Division of the Glidden Company, 2670 Elston Ave., Chicago 47, Illinois. Booth 308. Coconut oil products, shortenings, refined vegetable oils, Paramount Hardened Vegetable Oil for the confectionery industry, coconut. In attendance: Messrs. C. W. Lantz, E. C. Kaupert, S. F. Eaton, F. D. Machon, R. E. Nickson, C. S. Meyer, H. S. Davis, Paul Welker, W. A. Wymer, J. Hammond.

E. I. du PONT DE NEMOURS & COMPANY, Wilmington 98, Delaware. Booth 410. Cellophane and polyethylene candy packaging. In attendance: B. C. Robbins, R. M. MacDonald, W. J. Yerkes, J. H. Houser, D. M. Laudenslager, J. Isbell, R. J. Crowley, W. A. Hannigan.

ELECTRIC SORTING MACHINE COMPANY, 410 44th St., Southwest, Grand Rapids, Michigan. Booth 17. Photoelectric color sorting machines, pneumatic separators, vibratory feeders. In attendance: S. B. Parker, C. L. Palmquist.

FOOD MATERIALS CORPORATION, 2521 West 48th St., Chicago 32, Illinois. Booth 402. Vanilla, flavoring extracts and certified food colors. In attendance: E. E. Feight, P. T. Storr, E. N. Heinz, R. W. Koch, H. A. Ackermann, E. W. Jeffress, L. E. Drusendahl, G. L. Buckley, M. C. Osadnick, E. Pykett, T. P. Ryan, H. W. Kutz.

R. E. FUNSTEN COMPANY, 1515 Delmar Blvd., St. Louis, Missouri. Booth 22. Shelled pecans, eastern black walnut kernels. In attendance: H. L. King, F. Z. Stith, L. T. Schwieder.

EGG SOLIDS COUNCIL INSTITUTE OF AMERICAN POULTRY INDUSTRIES, 221 No. LaSalle St., Chicago 1, Illinois. Booth 701.

HARRY L. FRIEND COMPANY, 200 Old Colony Ave., South Boston, Mass. Booth 505.

GEVEKE & COMPANY, INC., 25 Broadway, New York 4, New York. Booth 307. Latest confectionery machinery from Europe, including new chocolate coaters, a depositor, sugar pulverizing mill and block shaving machine. In attendance: A. Heybroek, P. M. Pottetti, Dr. E. M. Huttrer, G. Ziffer.

THE GIRDLER COMPANY, Votator Div., Division of National Cylinder Gas Company, 224 East Broadway, Louisville 1, Ky. Booth 11. Votator heat transfer apparatus. In attendance: Lamar Roy, John Bolanowski, Boyd Mahon, Hewitt MacIntosh, Ted Beck.

GORDON CARTONS, INC., 1629 Warner St., Baltimore 30, Maryland. Booth 24. Candy boxes of all descriptions and base cards for packaging of 5¢ and 10¢ items. Neutrotex coating, rendering board odor proof and highly grease and moisture resistant. In attendance: Samuel Gordon, Charles Debuskey, Arnold Miller and Louis Frank.





Modern Plants

With four modern plants strategically located in the U.S. and Mexico, with printing facilities including Flexographic, Letterpress and Rotogravure, along with the latest type fabricating equipment, DIXIE is prepared to handle practically any flexible packaging problem arising in the protection, preservation and merchandising of foods.









New Jersey Division

Mexico Division FROST-O-GLAZE FROZEN FOOD OVERWRA bresheem DIXIE TATE DIXIE GLAS VELV-O-SEAL uper Freshees RYSTAL GLAZE SNO SHEEN KRAFT LOK ISPARENT SULFITES DIXIE THENE POLY COATED PAPE PRINTED POLYETHYLEN DIXIE CEL TED CELLOPHANE BRAD TITE DIXIE LITE Wax Paper Company

MEMPHIS . WASHINGTON, N. J.

J. W. GREER COMPANY, Wilmington, Massachusetts. Booths 404 and 405. Continuous Production Machinery. In attendance: Roderick L. Grace, Don S. Greer, Fred W. Greer, George Dolber, C. G. Cockinos.

GROEN MFG. COMPANY, 4535 Armitage Ave., Chicago, Illinois. Booth 208. Stainless steel steam jacketed kettles, revolving pans, vacuum kettles, agitators, mixers. In attendance: Fred H. Groen, Fred H. Groen, Jr., E. W. Barth, Jim Clegg, Jim Dunn, R. F. Groen.

GUNTHER PRODUCTS, INC., 600 East Main St., Galesburg, Illinois. Booth 40. Vegetable Protein whipping agents, GPI soy albumen and G400. In attendance: J. K. Gunther, R. C. Gunther, J. R. Turner, S. E. Kostelny, B. E. Blake, R. Delamar.

HOOTON CHOCOLATE COMPANY, 355 No. 5th St., Newark 7, New Jersey. Booth 8. Chocolate coatings and compound coatings. In attendance: G. B. Dodd, E. J. Teal, Lloyd S. Fiscus, Frank J. Wolf, Jr., W. R. Schoener, Roger C. Hubbard, Thomas L. Lyall.

THE HUBINGER COMPANY, 601 Main St., Keokuk, Iowa. Booth 3. O. K. Corn Syrup Unmixed. O. K. Corn Starches. In attendance: R. S. Fisher, R. L. Krueger, A. M. Robinson, L. C. Watson, Roy Underwood, Delbert L. Edwards, George W. Hines, D. L. Tiger.

THE HUGE COMPANY, 884 Hodiamont Ave., St. Louis, Missouri. Booth 38.

A. HUHN MANUFACTURING COMPANY, 3915 Hiawatha Ave., P. O. Box 1444 M' Haha Sta., Minneapolis, Minnesota. Booth 23. Starch drying equipment, dryers and coolers, etc. In attendance: Alex. G. Huhn, L. F. Maday, F. J. Novack.

I. D. COMPANY, 150 Spring St., New York City 12. Booth 205. Decorated and embossed metalware items. In attendance: A. S. Katzman, A. B. Katzman, S. L. Kaye, Max Rehns, Victor Cowley, L. Bernstein, Donald Rand.

INTERNATIONAL CONFECTIONER, INC., 80 Wall St., New York 5, New York. Booth 105.

J. A. JOFFE & COMPANY, 206 So. 13th Ave., Mount Vernon, New York. Booth 42. Icing flowers, sugar ornaments, decorating icing; aluminum molds. In attendance: Julian A. Joffe, Sarah F. Joffe, Mr. and Mrs. Roland D. Joffe.

A. KLEIN & CO., INC., 113-119 West 17th St., New York, New York. Booth 26. High-grade boxes, made for the confectioner exclusively. In attendance: Joseph Ehrenfeld, Mrs. Joseph Ehrenfeld, William Michaels.

H. KOHNSTAMM & COMPANY, INC., 11-23 East Illinois St., Chicago, Illinois. Booth 207. Atlas brand certified colors, flavoring extracts and concentrated oils for all types of confections. In attendance: Andrew Torter, Mortimer Moss, Justin Pulver, Franklin Hlavin, Thomas O'Brien, A. C. Hassel, Robert Pulver, William H. Nelson.

Cr

34.

16

Mi

Gr

Ge

Ye

in

Jr

ro

C

C

at

0

fe

LE ROY'S INTERNATIONAL RESEARCH LABORATORIES, State Highway 88, Point Pleasant, New Jersey. Booth 6. Chocolate Dipping machines. In attendance: Dr. Adrian Le Roy, G. E. Le Roy, Peppy Le Roy, John Cole, Mrs. John Cole.

LYNCH CORPORATION, P. O. Box 271, Anderson, Indiana. Booth 407. Wrap-O-Matic model RS cracker sandwich wrapping machine. In attendance: R. L. Sears, A. V. Petersen, R. E. Taggert, R. D. Aumend, R. N. Craven, H. R. Kalf.

THE MANUFACTURING CONFECTIONER, 418 No. Austin Blvd., Oak Park, Illinois. Booth 40. The Manufacturing Confectioner, Candy Packaging, Candy Equipment, Purchasing Executives' Number, Books, Candy Buyer's Directory. In attendance: P. W. Allured, Stanley Allured, Wesley Childs, James Allured, Allen Allured, May Seelman.

MERRILL LYNCH, PIERCE, FENNER & BEANE, 70 Pine St., New York 5, New York. Booth 10. News and quotation ticker, statistical and market reports, Market board. In attendance: Malcolm J. Forbes, Robert L. Stevenson, Robert R. Weihe.

MILLER WRAPPING & SEALING MACHINE COMPANY, 18 So. Clinton St., Chicago 6, Illinois. Booth 310. Corley-Miller Packaging Machinery. In attendance: M. H. Corley, J. P. Corley, R. H. Freeman, P. G. Freeman, Frank Kocarek, Jr., Joe Hagberg, C. W. Montgomery.

MILPRINT, INC., 4200 N. Holton, Milwaukee 1, Wisconsin. Booth 302. Flexible, printed packaging, lithographing; cartons; point-of-sale displays; promotional material; other packaging materials. In attendance: Roy Hanson, Bert Hefter, Lester Zimmerman, Harry Jones, James Heller, Walt Hullinger, Ralph Becker, Art Meyers, George Everitt, Roy Lundberg, Elmer Angsman, John March, Abe Jacobs, T. Cunningham, David Dooley, Art Grafstrom, John J. Sevick, Jr., Cliff Williams, De Witt Hull, Jerry Rose and Bob Boylan.

MOLDED FIBERGLASS TRAY CO., Linesville, Pennsylvania. Booth 601. Fiberglass trays and stock boxes. In attendance: J. W. Moore, Carl Hornkohl, Harold Ogust.

MURNANE PAPER COMPANY, 1510 N. Kostner Ave., Chicago 51, Illinois. Booth 29. Lint-free base cards, rolls, boats, dividers and partitions. In attendance: J. H. Murnane, J. Hobie Murnane, Frank J. Murnane, Jack Witt, F. H. Keegan, S. Peran, A. Drozda, W. Flintrup, G. D. Kells.

NATIONAL EQUIPMENT COMPANY, 153 Crosby St., New York 12, N. Y. Booths 31, 32, 33, 34. Overwrap machine, Disc Wrapper, Depositor, 16" Enrober, Continuous Vacuum Cooker, Batch Mixer. In attendance: William H. Kopp, Herman Greenburg, Sidney Greenburg, Charles Balin, George S. Perkins, M. M. Guggenheim.

NULOMOLINE DIVISION, AMERICAN MO-LASSES CO., 120 Wall St., New York 5, New York. Booth 210. Special centers for special coatings. In attendance: Karl Fromm, R. J. Sasseman, Jr., Frank Trager, N. Pike, Fred Janssen, James A. King.

PACKAGE MACHINERY COMPANY, West Chestnut St., East Longmeadow, Mass. Booth 301.

PEERLESS CONFECTIONERY EQUIPMENT COMPANY, 158 Greene St., New York 12, New York. Booth 401. Hansel Automatic Batchrollers, Hansel Universal Foiling Machine, Gabel Continuous Plastic Machine, Hansel Fondant Cream Beaters, Hansel Center Filling Pump. In attendance: Samuel Schwartz, Norman Schwartz, Otto Hansel, Jr., Mr. H. H. Kruse.

PENICK & FORD, LTD., INC., 420 Lexington Ave., New York City 17. Booth 2. Penford Confectioners Corn Syrups, Douglas Confectioners Corn Starches. In attendance: D. P. O'Connor, H. A. Horan, O. H. Tousey, P. G. Wear, S. Poer, J. A. Kooreman, F. J. McCrosson, W. J. Brown, Duke Vance.

QUINCY PAPER BOX CO., 230 North Third St., Quincy, Illinois. Booth 9. Plain and fancy set up paper boxes. In attendance: Paul Jochem, M. A. Jochem.

RACINE CONFECTIONER'S MACHINERY CO., 16 Park Row, New York 7, N. Y. Booth 201.

ROSS & ROWE, INC., 50 Broadway, New York 4, New York. Booth 1. Yelkin line of lecithin, Fries Flavors, Placto Milk and Cream Products. In attendance: W. F. Schlesinger, J. E. Lynch, O. M. Stout, H. R. Smith.

SAVAGE BROS. CO., 2638 Gladys Ave., Chicago 12, Illinois. Booth 206. Stainless steel steam jacketed tilting mixer, S. S. Marshmallow Beater, Mod. S-48 Fire Mixer, cluster attachment. In attendance: R. W. Emerson, W. P. Halpin, M. J. Linden, R. J. Savage, Jr.

ROBERT E. SAVAGE COMPANY, 1901 Clybourn Ave., Chicago 14, Illinois. Booth 27. Resco Stainless Steel revolving pan, Resco 100 lb. chocolate tempering mill and dipping table, Resco 350 lb. chocolate tempering mill, Resco aluminum dipping trays, Resco aluminum paddles and turning bars. In attendance: Robert E. Savage, Norbert H. Savage, M. S. Savage, Robert E. Savage, Jr.



BRAND NEW FOR 1954

The Candy Buyer's Directory and The Directory of Candy Brokers have both been revised and brought up to date into this one big valuable volume for the use of the entire candy industry.

This is the only published source for volume buyers of candy, it is the only complete national list of candy brokers for both buyers and manufacturers, and brokers will find this an invaluable reference for locating and identifying manufacturers and other brokers.

Order YOUR Copy Today

Directory Division The Manufacturi 418 N. Austin Bl	on ng Confectioner Pub. Co. vd., Oak Park, Ill.
Enclosed find m	y check forto cover
the cost of OF CANDY BRO	_copies of the DIRECTORY OKERS at \$4.50 ea.
Name	Title
Firm	
Address	
City	Zone_State_

SCANDIA MANUFACTURING COMPANY, 500 Belleville Turnpike, North Arlington, New Jersey. Booth 35. Cellophane wrapping machines. In attendance: W. B. Bronander, Jr., Herbert H. Beams, Edwin N. Brooks, Vi Denson.

F. J. SCHLEICHER PAPER BOX COMPANY, St. Louis, Missouri. Booth 303. Gift boxes and valentine hearts. In attendance: Allen, Lawrence and Frank Schleicher, Mr. Clarence Strack.

SETTER BROTHERS, INC., Cattaraugus, New York. Booth 12. Paper Candy Sticks. In attendance: C. E. Butler.

W. C. SMITH & SONS, INC., 2539 N. 9th St., Philadelphia 33, Pennsylvania. Booth 503. 5" and 10" Chocolate Coating Machines, chocolate melting and tempering kettle, plastic cream center forming machine, caramel and nougat cutting machine. In attendance: W. C. Smith, Sr., John E. Lockton, W. C. Smith, Jr., Ted Merckens, S. Charles Jacques, John H. Jacobs, Les Drusendahl, Roger C. Hubbard.

A. E. STALEY MFG. CO., Decatur, Illinois. Booth 304. Candies with Staley's ingredients. In attendance: L. S. Roehm, A. R. Staley, I. F. Wieland, C. D. Sutter, L. H. York, H. J. Reavis, R. R. Dombroski, L. D. Borden, L. G. Trempel, H. Brock, N. K. Hammer, C. W. White.

STEN-C-LABL, INC., 287 North Snelling, St. Paul 4, Minnesota. Booth 104. Sten-C-Labl carton addressing system. In attendance: L. R. Mooney, H. T. Berkland.

WM. J. STANGE CO., 342 No. Western Avenue, Chicago 12, Illinois. Booth 7. Peacock Brand Certified Food Colors. N.D.G.A. Antioxidant. In attendance: H. P. Smith, Wilbur Kretlow, C. A. Wood, F. K. Koepke.

SUGAR INFORMATION, INC., 51 Wall St., New York 5, N. Y. Booth 618.

SUNKIST GROWERS, 616 East Grove, Ontario, California. Booth 306. Exchange Orange Oil, Exchange Lemon Oil, Exchange Citrus Pectin. In attendance: D. R. Thompson, L. C. Gallagher, E. L. Rhoads.

GEORGE H. SWEETNAM, INC., 286 Portland, Cambridge, Mass. Booth 103. Sweetone products packaging papers. In attendance: R. A. Whittier, Jr., F. A. Sweetnam.

TRAVER CORPORATION, 358 West Ontario St., Chicago 10, Illinois. Booth 512.

TRIANGLE PACKAGE MACHINERY CO., 6633-55 W. Diversey Ave., Chicago 35, Illinois. Booth 108. Single scale Elec-Tri-Pak Net Weigher, Elec-Tri-Pak table model net weigher. In attendance: Walter P. Muskat, Robert L. Muskat, L. R. Muskat, Peter Muskat, Don Thom, R. W. Amos, R. W. Simonson.

C. E. TWOMBLY COMPANY, 146 Mystic Avenue, Medford 55, Massachusetts. Booth 511. Candy cups, all sizes and shapes and colors. In attendance: Wm. E. Smith, Elmer Anderson, Dick Herdrick.

UNION CONFECTIONERY MACHINERY CO., INC., 318-322 Lafayette St., New York 12, New York. Booths 36 and 37. Rebuilt confectionery, chocolate and packaging machinery. In attendance: Sidney Greenberg, Sol Goldstein, Charles Balin, Barbara Green, Charles Greenberg.

Bran

Bra

Joh

Qu

He

We

He

Ho

Mr

Wh

Ch

Cu

*Kr

*Zie

*M

Bo

Gi

Do

†Mi

*Use †Incl Bra

T

sun

con

an

wai

enc

sur

pop

the

par

can

the

195 up

be

the

ing

This and Quaduct not five ma

for

T

UNION SALES CORPORATION, Columbus, Indiana. Booth 204. Products from corn. In attendance: E. B. Pulse, G. W. Anderson, Deryl Foster, Pack Gourno, K. Murdock, W. Bissell, C. W. McCrary, C. Grathen, E. Jaross, M. Naylor.

VACUUM CANDY MACHINERY CO., 15 Park Row, New York 38, N. Y. Booth 202.

WHITE STOKES COMPANY, INC., 3615 Jasper Place, Chicago 9, Illinois. Booth 5.

VOSS BELTING & SPECIALTY COMPANY, 5645 N. Ravenswood Ave., Chicago, Illinois. Booth 11. Hi-Gloss and Kleer Gloss Enrober Belting, caramel boards, endless feed and bottomer belts, batch roller belts, canvas specialties for candy manufacturers. In attendance: Robert J. Voss, Joseph H. Voss, Sr., Frank A. Gusinde, Warren E. Frandsen, Edward Kordt, Al Horka, Harry Jenks, Ted Merckens.

T. C. WEYGANDT COMPANY, 165 Duane St., New York 13, New York. Booth 409. Chocolate moulds, chocolate tempering machine Rasch, foil wrapping machines, OKA Marzipan forming machine. In attendance: Max Kaderle, C. B. Kaderli, Gustave Bache.

WRAP-ADE MACHINE COMPANY, INC., 83 Valley Street, Belleville 9, New Jersey. Booth 21. Candy Pop Wrapping Machine. In attendance: A. M. Powell, Jr., W. L. McCambridge.

Page 62

THE MANUFACTURING CONFECTIONER

Confectioners' Briefs

Packaged or Boxed Candy

The Question:

Do you buy candy in packages or boxes?

Per Cent and Number of Buyers Number of Brands

Per Cent Number Year 69.3% 192.073 80 1954

Consumer Preference for Leading Brands in Greater Milwaukee

	Per cent o	of all families	buying pacture each bra	kaged or nd.	Total number of Greater Milwaukee families using each brand.				
Brand	1954	1950			1954	1950			
Brach's	22.0%	18.0%			42,256	34,291			
Johnston's	16.7	17.6			32,076	33,529			
Fanny Farmer	14.0	27.5			26,890	52,390			
Quality	6.6	2.7			12,677	5,144			
Hershey	6.2	7.8			11,909	14,860			
Weber	5.8	4.2			11,140	8,001			
Heinemann's	1.8	2.6			3,457	4,953			
Bunte	1.4	1.7			2,689	3,239			
Holly Carter	1.4	1.1			2,689	2,096			
Mrs. Steven's	1.4	2.2			2,689	4.191			
Whitman	1.4	1.3			2,689	2,477			
Chocolate House	1.2	1.4			2,305	2,667			
Curtiss	1.2	1.2	#		2,305	2,286			
*Kraft	1.2				2,305				
*Ziegler	1.2				2,305				
*M & M	1.1				2,113				
Boston Store	1.0	1.8			1,921	3,429			
Gimbels	1.0	1.4			1,921	2,667			
Don't Know	8.3	5.9			15,942	11,240			
Miscellaneous	10.4	12.0			19,976	22,861			

*Used by less than 1% in 1950 and therefore included under "Miscellaneous" in that year. †Including all brands used by less than 1% of the total buyers of this product (1954, 62 brands). Brand preference totals: 1954, 105.3%; 1954, 110.4%.

The above table is taken from the 1954 Consumer Analysis of the Greater Milwaukee Market, conducted by The Milwaukee Journal. This is an annual survey of the buying habits of Milwaukee residents, based on their brand preferences in response to a mail survey, with the survey sample weighted by income areas and population areas, to give a true cross section of

the entire city's buying habits.

The most pertinent fact seems to be the comparison in over-all buying of packaged and boxed candy. In 1950 75% of the families indicated that they bought packaged or boxed candy, while in 1954 only 69.3% said that they did so. The line up of brand preferences may, for all we know, be a perfect mirror of the actual preferences of the people of Milwaukee, except for the surprising appearance of Holly Carter among the brands. This brand, belonging to the A & P Food Stores, and the candy which was manufactured in the Quaker Maid plant of A & P, has not been produced for at least three years, and probably has not been in the Milwaukee market for four or five years. A partial reason may be that there may be some display stands in the A & P stores which carry the Holly Carter name, though all the candy would carry the current brands of A & P, Warwick and Worthmore. A similar survey, conducted by the Seattle Times, of the Seattle market is reproduced on the next page.



Bachman Chocolate Manufacturing Company, Mount Joy, Pennsylvania, have announced the appointment of Walter H. Kansteiner Company as exclusive representatives in the Chicago, Milwaukee and St. Louis trade areas.

Walter H. Kansteiner, Sr., has a broad experience in this industry extending over forty years. He was

a department manager for Butler Brothers and bought candies for St. Louis and later Dallas, Texas, branches of this concern. Returning to St. Louis joined the sales force of the O. H. Peckham Factory of National Candy Company as City salesman. After several years entered the

Boxed Chocolates

Question asked:

Do you buy boxed chocolate candy?

Per Cent and Number of Family Buyers

Bre lar cor

of

old Da sor

gai tar

lec bee fiel ha pa me col ste ha an sal ch pla Le

the

eq

Ru

of

co

us

pr ty

is

sa

fo

Year	Per cent	Number
1954	29.8	48.455
1952	33.9	61,393
1951	38.7	68,030
1950	51.2	89,934

Consumer Preference of Leading Brands in Seattle

	Seattle Families Buying This Item Per Cent							
Brand	1954	1952	1951	1950	Number 1954			
Russel Stover	15.1	14.6	13.1	11.3	7,317			
Dent's	14.0	17.1	17.7	13.7	6,784			
Whitman's	12.7	12.0	10.0	9.8	6,154			
Rogers	9.0	8.1	8.3	10.2	4,361			
Frederick & Nelson	6.3	4.8	5.6	5.4	3,053			
Brown & Haley	4.8	2.9	3.3	4.7	2,326			
Van de Kamp's	3.9	4.9	4.7	3.3	1,890			
Societe	3.7	6.2	7.1	12.0	1,793			
Brach's	2.3	2.6	1.9	1.1	1,114			
*Roxbury	1.6			***	775			
Hyde's	1.5	1.6	2.9	2.7	727			
Cecil Hall	1.4	1.6	1.4	1.2	678			
Don't Know	11.1	7.8	10.2	13.3	5,426			
Miscellaneous	15.5	14.8	6.9	6.8	7,511			

^{*}Used by less than 1% in 1952 and therefore included under miscellaneous that year.

Percentages add to more than 100% because some families use more than one brand.



for PROTECTION



and BEAUTY specify

RHINELANDER



FUNCTIONAL PAPERS



Stainproof, non-sticking Rhinelander glassine that preserves flavor and freshness is ideal for bonbon cups, inner or outer bar wraps, case liners, dividers, and dipping sheets. Available plain or in a variety of



RHINELANDER





[†]Including all brands used by less than 1% of the total buyers of boxed chocolate candy.

Brokerage field. One of his first principals was a large manufacturer of wooden candy pails, which company brought him to Chicago to take charge of their Chicago office and did business with such old giants of that day as M. Shields & Co., Martin Dawson, Central Candy Company, as well as some of the present day leaders.

The advent of the candy bar and the corrugated shipping container made the old 30 pound taper and No. 4 squat wooden candy pail a col-

lector's item.

Mr. Kansteiner for the past sixteen years has been most active in the bulk chocolate coating field. Several times, in the past few years, he has addressed the Chicago candy industry and participated in panel discussions at luncheon meetings on Chocolate and Cocoa bean market conditions.

The Company also consists of Walter H. Kansteiner, Jr., and Elmer T. Rennicke. Walter Jr. has four years of Chemical-Engineering at M.I.T. and before coming into the organization as a salesman, he trained six weeks or more in the chocolate department of two Chicago candy plants.

Mr. Rennicke has sixteen years experience with Lever Bros. in the Shortening division as Sales Manager in Chicago; has been with this Company two years as Chocolate representative to

the Baking industry.

Walter Kansteiner and his associates are well equipped in every department to serve this industry well.

Russell Stover died recently at his home in Miami, Florida. He was the founder and president of Russell Stover Candies of Kansas City, Missouri.



Doumaks Marshmallow Co., Inc., has announced the beginning of national distribution of their Miniature Marshmallows. These marshmallows are extruded through a nozzle just after the continuous whipping operation, and are cut to shape, eliminating the starch molding operation usually employed in forming marshmallow. These products are about 1/16 the size of the standard type, with approximately 1,000 to the pound. It is claimed the texture and flavor is exactly the same as of the large starch cast type.



HEEKIN Product Planned Cans are the result of more than fifty-three years of can manufacturing and the service and study of each customer's requirements. The product comes first—the adaption of a colorful lithographed can to the product—to your production, marketing and profit problems—are a part of Heekin Product Planned Lithographed Cans.





Here is the real secret of impulse buying that leads to bigger candy sales. Crystal Tube packaging gives your candy the irresistible appeal that fairly shouts "pick me up, you'll like me fine!" Whether it's plain or printed, this modern transparent packaging adds the fresh, clean look which is a vital part of modern candy merchandising . . . and it effectively controls moisture gain or loss, keeping your stock "fresh" longer. You can always count on

friendly, expert packaging assistance when you





Wi

of t pre

Col hel

195 Ha

Tre

ret Co.

W٤

and

Ca

tit

pu Co

of

in

als

die

Hi

Ca

wi

Six Th

ne

mi

wi coa

bu

int

Ed Ch

Bu

Th

for

pe

48

th

W

H

co

pa

er

Co

Pa

co

w

or

sp

ar

fo

Life Savers is using outdoor posters to cover selected markets nationally for five months. This campaign marks Life Saver's return to the medium after a number of years.

Fred W. Amend Co. has moved their sales offices from Chicago to 1603 Orrington Ave., Evanston, Illinois.

Lloyd W. Bowie, sales manager for Ernest E. Johnson Co., Davenport, Iowa, announced the completion of a successful promotion based on a contest for jobber salesmen. An Emerson portable radio, with leather carrying case, was the contest prize, awarded to twelve jobber salesmen. During this contest, the jobber salesmen were paid a 11¢ per box bonus commission for placing cartons of Kongen of Danmark cough drops in retail stores. Mr. Bowie states that the contest produced the desired result, proving to the jobber salesmen that their cough drop was a consistent seller all year.

PLAIN OR

IN BAGS, SHEETS, AND ROLLS

SEND YOUR SAMPLES FOR PROMPT QUOTATION

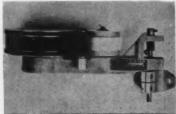


IMAGINATIVELY DESIGNED . EXPERTLY PRINTED

N. T. GATES COMPANY 1110 DREXEL BUILDING . PHILADELPHIA 6, PA.

Add the "WHIPPET" Marker

For Conveyor Line Efficiency



Easily adaptable to your present lines automatically marks production runs of cartons, packages, etc. Friction between Marker and moving package imprints date, code, or any other information. No oscillation of printing drum.

Inking through felt roller and self-contained reservoir— interchangeable rubber type—widely used in candy field. Send for FREE catalog.

THE INDUSTRIAL MARKING EQUIPMENT COMPANY, INC. William O. Wallburg, Assistant General Manager of the W. F. Schrafft & Sons Corp., was re-elected president of the New England Manufacturing Confectioners' Association at the annual meeting held at Schrafft's Restaurant, Boston, on May 5, 1954. Other officers elected were: Vice president Harry Gilson, F. B. Washburn Candy Corp.; Treasurer Carl E. Nelson, Brigham's, Inc.; Secretary Lawrence L. Lovett, Deran Confectionery Co.; Directors are the above officers and Robert C. Daugherty, James O. Welch Co., W. Arthur Warren, New England Confectionery Company and Lane W. Fuller, Daggett Chocolate Company.

Candy Manufacturing in New England is the title of a very attractive sixteen page booklet published by the New England Manufacturing Confectioners Association, to describe the history of candy manufacturing throughout the world in general and in New England in particular. It also tells something of the place of candy in the diet.

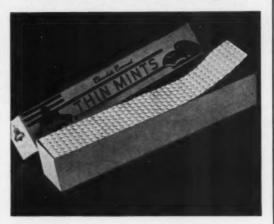
Hickok Honeycomb Chocolate Chips by Spangler Candy Company, are now being made available with a milk coating for the first time in over sixty years that this candy has been marketed. There has also been an addition in the form of a new center, a green colored honeycomb chip with mint flavoring, to be called "chipmint," supplied with a dark chocolate coating. The regular dark coated molasses chip is still the leader of the line, but the two new items are showing a growing interest.

Edward J. Flynn, executive vice-president of Cook Chocolate Company, has been accepted for the summer session of the Executive Program in Business Administration at Columbia University. This program is a concentrated course of study for executive, training men for top administrative jobs in organizations demanding high competence in their policy makers, and is limited to 48 men for each session. Mr. Flynn has been with the Cook Chocolate Company since the company was founded, 19 years ago.

Howard J. Roeser has been elected secretary and controller of Bunte Brothers Chase Candy Company. He was city sales manager of Bunte Brothers, before it was taken over by the Chase Candy Company.

Package Machinery Company is exhibiting, at the convention, a new Hansella Rope Control Unit which can be hooked up with either a die machine or a cut-and-wrap machine. It will adjust the speed of the batch former to provide just the right amount of rope for the forming or cut-and-wrap machines. They will also exhibit a Forgrove Bunch Wrapping Machine and a Hansella Vertical Combined Batch Feeder and Sizer.

For Maximum Protection at Lowest Cost Use SWEETONE Decopad



The most widely used candy padding in the United States. We maintain a special converting department to emboss, cut and die cut our paddings to your requirements.

Write Today for a new folder containing actual samples of our complete line of Sweetone Paper Products for manufacturing confectioners including:

Shredded Paper. Chocolate Dividers
Waxed Papers Boat & Tray Rolls
Wavee Parchment Layer Boards
Embossed Papers Die Cut Liners
Candy Box Paddings

See us at Booth 103 NCA Convention

George H. Sweetnam, Inc.

282-286 Portland Street, Cambridge, Mass.



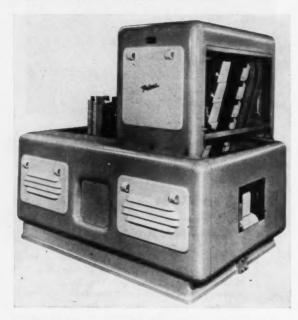
Representatives in Philadelphia, Detroit, St. Louis, Chicago, Dallas, New Orleans, Los Angeles and Portland, Oregon.

What's New

in Candy Packaging

"Clarophane" is the name of a new super-protective nitrocellulose coating for glassine papers that is claimed to have twice the moisture-vapor-proof qualities of most such laquers now on the market. In addition, the manufacturer claims that its excellent heat-sealing qualities will guarantee top performance on automatic bag equipment.

For further information write: Rhinelander Paper Company, Rhinelander, Wisconsin.



A New Rotary Carton Forming and Gluing Machine has been introduced that is reported to be the fastest of its type ever built. It automatically converts blanks into glued cartons or trays at speeds of 175 or more per minute. The machine also operates efficiently at lower speeds of 50 per minute and over. This model is adjustable and convertible to set up a wide range of topopening, hinged cartons or trays, in sizes from 6 inches to 18 inches long, and 91/2 inches to 22 inches wide. An additional feature is "Perfect Package Control" provided by clamps which hold the carton until the glue sets, preventing any slipping or sliding during the gluing cycle. The operation is entirely automatic, requiring only the supplying of blanks.

For further information write: Peters Machinery Company, 4700 Ravenswood Ave., Chicago 40, Illinois.

A High Speed Hygroscopic Powder Filler has been developed for the packaging of hydroscopic and non-free flowing powders into containers for 4 oz.

to 2 pounds. A hydraulic vibrating mechanism settles this type of powdered material with a minimum of dusting. A specially designed auger does the filling at the unusual rate of 50-70 per minute and maintains close weight tolerances to plus or minus ½%.

For further information write: Geveke & Co., 25 Broadway, New York 4, N. Y.

A Sponge Cushion has been developed that will give relief to workers who must stand for long periods, and yet is protected against the common hazards in food plants. This pad is made of strong non-staining sponge rubber compound, with a fabric backing that prevents curling and provides stability, and a Vinyl facing that protects the rubber from abrasion and resists oils, alkalies and other chemicals. This pad comes in 18 and 36 inch widths, and any length up to 40 yards, and in four colors.

For further information write: Industrial Division, Durkee-Atwood Company, Minneapolis 13, Minn.

Jabez Burns & Sons, Inc., have entered the chocolate and confectionery mold field by special arrangement with N. V. Vormenfabriek of Tilburg, Holland. Jabez Burns is offering a full line of molds, for shell goods and hollow figures, as well as bar and solid work.

Methods of Moisture Determination are covered in a booklet, which describes the methods recommended by the Association of Official Agricultural Chemists. This booklet includes most agricultural and food products, including confectionery and cocoa products, and describes the equipment, and cost of equipment, necessary for each type of moisture determination.

For further information write: Central Scientific Company, 1700 Irving Park Road, Chicago 13, Illinois.

"Wet Wall" paint has been developed that is said to solve the maintenance problems of walls constantly wet with condensation or steam. The paint bonds securely even when applied to a dripping wall, and forms a hard enamel surface. It allows atmospheric moisture to pass through the painted surface without destroying the paint bond.

For further information write: George Kirby Jr. Paint Co., 14 Wall Street, New Bedford, Mass.

"The Action of Modern Bread Emulsifiers" is the title of a scientific folder describing the physical chemistry and properties of various emulsifiers and their action in dispersing fat in bread doughs, and evaluates diacetyl tartaric acid esters of mono and diglyserides. With the demand for emulsifiers in compound coatings, it seems pertinent for the candy chemist to investigate all types of food grade emulsifiers on the market.

For further information write: Hachmeister-Inc., Food Emulsifier Division, P. O. Box 357, Pittsburgh 30, Pa.

Supply Field News



11

Mr. Frederick H. Leonhardt, chairman of Fritzsche Brothers, Inc., was honored by a dinner-dance on the occasion of his sixtieth anniversary with the firm. Over four hundred associates and guests attended this gala event, including the

executives and employes from both the main office and the Clifton plant, sales representatives and all ten-year employes for the company's nine U.S. branch offices and from its Canadian affiliate and Mexican agency. Mr. Montgomery presented, on behalf of all employes, a fine oil painting of Mr. Leonhardt. Mr. Montgomery presented Mr. Leonhardt with a fine oil painting of the latter, an anniversary gift from all employes. Several congratulatory messages were read, including one from Schimmel & Company, the famous Leipzig chemical firm that gave Mr. Leonhardt his first job prior to joining Fritzsche Brothers. Each guest received a bound booklet containing a reproduction of the portrait presented to Mr. Leonhardt and a brief biographical sketch of his business career.

Atlas-Goldschmidt, G.m.b.h. has been formed in Essen Germany, by the Atlas Powder Company of America and Th. Goldschmidt, A.-G., of Essen. Beginning July first, the new enterprise will undertake a broad program of product research and development, and will market surface active agents and emulsifiers throughout Europe and other parts of the world.

Wecobee Hard Butter Division has been created at E. F. Drew & Co., Inc., to handle the sales of these products. Mr. James J. Leddon has been named sales manager of this division.

America's Finest
Confectioners call on
FOXON
for
seals
labels
holiday slides and tags

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET, PROVIDENCE LABOR SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

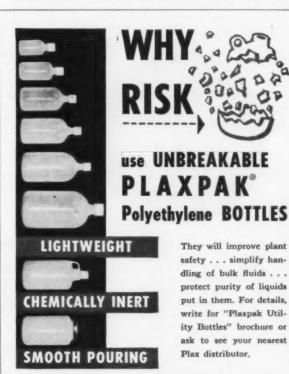
THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COMPANY O
235 WEST PARK STREET SIGNAM

THE FOXON COM

America's Finest Foil Printers"



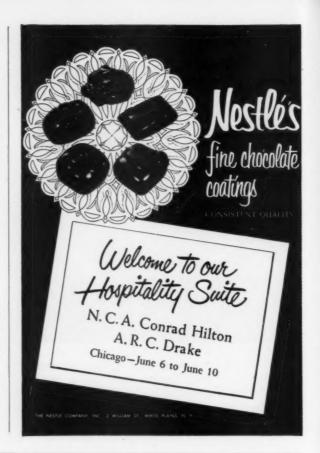


PLAX CORPORATION
DEPT. C, WEST HARTFORD, CONNECTICUT

Rhinelander Paper Company has moved its New York Office to 500 Fifth Ave., New York 36, N. Y.

Candy Women Executives Club has been formed with Miss Mary A. Sonley, sales manager of De-Met's, as president. Other officers named are: Harriet Sumner, candy buyer of Wieboldt's, vice president; Loretta M. Fisher, secretary-treasurer of George Ziegler Company, treasurer; and Gertrude Kluck, editor and publisher of The Confectioner, secretary. The primary purpose of this new club is stated to be to discuss and study the candy business in all its phases and to further inculcate a spirit of friendship among its members. Plans are being laid for the first industry-wide meeting in Chicago during the week of the NCA convention, and invitations to join will be sent to candy women in all parts of the country.

White-Stokes Company, Chicago, has announced the following appointments to their sales staff. Smith Brothers Brokerage Co., Seattle, for Washington, Oregon, British Columbia and Alaska; Rodman-Hornburg Company, Dallas, for Northern Texas; F. M. Carriere & Son, New Orleans, for Southern Texas, Louisiana and Mississippi; Myers & Hicks Company, Baltimore, for Maryland, North and South Carolina, Virginia and Washington, D. C.



mil

sol

eva

tro atio

to

mo

pla

the

los

the

eit rei mi

in

ter

ter

m

ph

sir

ex

fla to of

ce

gr th as

fo

the standard for engineering phecision

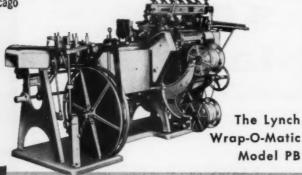
versatile, efficient candy packaging

The precision-engineered Lynch Wrap-O-Matic, Model PB, is the answer to candy wrapping problems. Versatile . . . it wraps fragile, irregular shaped and standard products. Efficient . . . it loads direct from product trays with only two operators required. Economical . . . it minimizes scrap loss.

See us at
Booth 407
Confectioners' L
Exposition,
Chicago

Write to Dept. MC for details

Lynch Packaging Machines are manufactured by the most rigid engineering standards in industry. They assure careful selection of materials, absolute quality control of workmanship and thorough inspection in all phases of production. They demand economical interchange of parts. The results are rugged construction, day-by-day dependability.

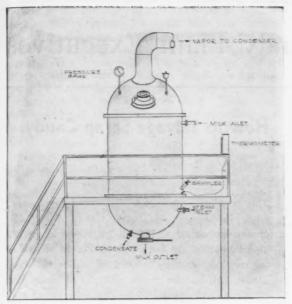


ANDERSON, INDIANA

LYNCH

Branches: New York ● Toledo ● Chicago ● San Francisco ● Los Angeles Atlanta ● Dallas ● Toronto—Export Dept.: 13 East 40th St., New York 16, N. Y. Cables: ARLAB

PACKAGING MACHINES



High Density Milk Pan

(Continued from page 36)

in milk. Approximately 871/2% of the whole liquid milk is water, and the remaining 121/2% is the milk solids which is the product we desire. During this evaporation process, the temperature is carefully controlled. The actual temperature will vary with operation, but generally speaking, it will be comparatively low, in the range of 130-140° F. or less. This particular factor is important since at these low temperatures the impairment of the milk flavor is held to a minimum. After the milk has been evaporated to a dense, syrupy consistency, in the range of 8-12% moisture, it is removed from the vacuum pan and placed in a melangeur or similar type of machine. In this operation the moisture is further reduced. At the point when the crystalization of the sugar is just about to begin, the chocolate liquor is added to the mass and the product is finished down to as low a moisture as 1%. In some processes additional sugar may be added just prior to the addition of the chocolate liquor. This product is then ready for either storage or the addition of cocoa butter and the refining and conching processes which finally yield milk chocolate.

These are several basic and important advantages in this type of process. First, the low temperature tends to eliminate the destruction of the vitamin content present in the natural liquid milk. Second, it also minimizes the detrimental effects on the natural phosphatide content of the milk. This is important, since the phosphatides act as antioxidants and are extremely helpful in the preservation of a good milk flavor. Third, the sugar present in the batch tends to stabilize and reduce rancidity caused by the action of the natural lipase present. Fourth, the high concentration of sugar present tends to minimize the growth of the bacterial content of the milk. Fifth, the cocoa butter present in the chocolate liquor acts as a film, formed in the very earliest stages of the

mixture of the chocolate mass with the milk solids and the sugar to give a more continuous fat surface throughout the product. This lends greater stability to the product and a more uniform milk flavor in the product. And, finally the sugar, instead of crystallizing normally as sucrose would alone, has a tendency to assume a characteristic which might be described as "amorphous," since the crystallization is hindered by the presence of the fat in the process. This results in a grain structure which is uniquely useful in producing chocolate, the fact that the fat present will tend to be less bound and consequently more effective in lowering the viscosity of the final coating at any given fat concentration. On the other hand, several important disadvantages of this process are obvious. One, milk must be available in the immediate vicinity of the manufacturing plant. Two, this process requires a considerable amount of equipment. And, three, this process is rather long and tedious. Finally, in the over-all picture it is a rather costly process as compared to any other.

The Dry Milk Process:

In the dry milk process the initial preparation of the milk product is carried on in a dairy plant using either a spray drying machine or a roller drying machine to reduce the liquid raw milk to a solid of very low moisture content. Several other processes such as the vacuum roller can be used, however, at the present time they are not used on a sufficiently large scale for the preparation of milk in chocolate manufacture to warrant discussion here. It should be noted, however, that several interesting developments in these types of products are underway and this is discussed a little later.

In the spray process the basic procedure involves the forcing of the milk either pre-condensed to about 30% solids or without pre-condensing into a large chamber through an atomizing nozzle at high pressure (e.g. 2,000 PSI). At the same time, counter



Helpful Books for Candy Plant Executives

Profits Through Cost Control for Manufacturing Confectioners

by Frank Buese and Eric Weissenburger

This booklet is a compilation of five articles which appeared in The Manufacturing Confectioner during the last two years. This material deals with the problems of cost control in candy plants, including planning for profit, controlling material costs, labor costs, distribution costs and overhead costs. The emphasis is on planning operations so that a profit will be made, and in detecting those factors which will adversely affect profit before they can seriously cut the planned profit.

A Textbook on Candy Making

by Alfred E. Leighton

Here is a textbook where the reader can learn the basic fundamentals of candy making, the "how" and "why" of the various operations in non-technical terms. Particular attention is given to the function of raw materials, and why each is included in a formula.

How to Salvage Scrap Candy

curr

dry fine rapi of t mat chir diffe

disc

pro

will

two

stre

tem

whi

pur

spra

acc

rota

dia

hea

tate tro

the

fixe

dra

exi

pro

dry

per

wit

les

spi

ufa qu

for

T

by Wesley H. Childs

This booklet is a complete revision of the author's work "Modern Methods of Candy Scrap Recovery" published in 1943. A considerable amount of information has been collected since that time on methods and techniques of salvaging scrap candy. This booklet covers all types of candy, and gives many practical and economical ways of converting scrap candy into a useful form for re-use.

Candy Production Methods and Formulas

by Walter Richmond

This is a big 640 page book designed to give practical information on (1) ingredients and cooking action, (2) mixing, coating, etc., (3) trouble shooting. Over 500 formulas are given, with the methods of processing, and their reasons why.

How to Salvage Scrap Candy \$2.00	Book Department CH The Manufacturing Confectioner Publishing Company Al8 N. Austin Blvd. Oak Park, Illinois
Candy Production Methods	
and Formulas	Gentlemen:
\$10.00	Enclosed is my check for \$ to cover the cost of the books I have checked at the left.
A Textbook on Candy Making	N
	Name Title
\$6.00	Firm
Profits Through Cost Control	Street
\$2.00	City Zone State

current to the fine mist of milk there passes through the chamber a stream of hot air. This blast of hot, dry air coming into intimate contact with the very fine droplets of milk evaporates the moisture quite rapidly. The dry powder then falls to the bottom of the chamber and is removed. There are approximately a dozen different types of spray drying machines available in the world today. While each differs in detail, the basic method of operation is as discussed.

This equipment is characterized by, one, its high productive capacity, for example a typical machine will handle 15,000 pounds of liquid milk per hour; two, the short time in which the milk is heated, the powder will only be in contact with the heated air stream for several seconds; and finally, the very high temperature of the air stream in the drying chamber which ranges from 210-310° F. At the present time in the United States the bulk of milk used for all purposes other than chocolate, is dehydrated by the spray dry process.

The atmospheric roller drying process is generally accomplished on a machine composed of two large rotating drums which are steam heated. The drums on a typical machine are approximately 35 inches in diameter by 6 feet long. The drums are directly heated with steam at between 40 and 80 PSI and rotate from 12-30 r.p.m. The milk is piped into a trough formed between the nip of the two rolls where it actively boils and finally a film is taken from the bottom of the nip and around the rollers and is removed from the roller at the opposite side by a fixed doctor blade. The powder having been dehydrated to a very low moisture content while in intimate contact with the heated surface of the drum.

Several important differences for milk chocolate use exist between the final products of the spray drying process and the roller drying process. In the spray dry process the milk is subjected to quite high temperatures, but for extremely short periods of time with the result that flavor deterioration is much less than in the roller dry process. On the other hand, spray dry milk is less desirable generally in the manufacture of chocolate because of the higher fat requirements necessary due to adsorption of the fat in the milk particle leaving less fat available as fat free to provide the viscosity effect needed in chocolate coatings. Special processes have been put into use, however, to lower this effect. (2, 8.)

In the manufacture of milk chocolate with the use of powdered milk a great deal of simplification can be effected in the initial stages of the operation, since the milk powder is essentially low in moisture (about 2½-3½%) when received, it is immediately ready for mixture with the chocolate liquor and sugar in the preparation of a batch. Consequently it can be immediately prepared and is ready for the rolling, and conching operations. The advantages in this are very obvious. The manufacture of chocolate is independent of the raw liquid milk supply, since dry milk can be shipped very readily and, in fact, as a commodity of commerce today is a quite stable item. Second, the process is considerably simplified, elim-

inating a large amount of specialized machinery in the chocolate plant so that it is much more economical. On the other hand, the direct use of spray or roller dried milk has generally not been as successful a process in providing some of the flavor characteristics in the finished milk chocolate which have found quite broad acceptance among the consumers of this country.

For this reason much study and research has been done to try and achieve the flavor which results from the liquid milk process and at the same time obtain the economy so characteristic of the dry milk process. This research has been responsible for what might be called the development of intermediate processes, or third type of milk processes, and although almost any conceivable combination of the two basic methods is possible, we will only list here certain types which have received the most specific attention.

- Spray drying liquid milk with low fat cocoa solids present.
- Spray drying condensed milk with sugar and cocoa solids present.
- Roller drying high solids pre-condensed milk with both chocolate liquor and sugar present.
- 4. Freeze drying pre-condensed milk. (4)
- Vacuum roller processes with various combinations of chocolate liquor and/or sugar; and finally, specialized processes where enzyme action is deliberately induced to provide specific flavor. (1, 3, 6, 7)

It is obvious from the above list that certain specific conditions in the liquid milk process have been individually studied in order to achieve the flavor characteristic which it produces yet to accomplish this in a more efficient and time saving manner. Some of these factors are as follows:

- The use of low temperatures in the evaporation operation.
- The effects of the chocolate liquor together with the milk while a relatively high moisture content still remains in the latter.
- The presence of browning type reactions (Maillard) in the mixture.
- 4. The reaction of natural milk enzymes in both the milk fat and the cocoa fat.
- The action of the tocapherols, the phosphatides and other antioxidants naturally present in milk, together with the vitagens present in cocoa matter.
- The sulphydryl compounds which generally are formed when elevated temperatures above 165°
 F. are used in milk evaporation. (5)
- The effects of heat on the milk proteins which tend to denature them and affect the degree to which they absorb cocoa fat.

Finally, as mentioned previously, the modified crystallization of the sugar as a result of the presence of the cocoa fat.

I have here some pictures and diagrams illustrating typical types of milk processing machinery which we have discussed so that you may see what these particular pieces of equipment look like. The first picture is a photograph of a high density vacuum pan. This is typical of the type of equipment used in milk evaporation for chocolate manufacture by the liquid milk process. The pan is approximately 4 feet in diameter and about 6 feet high. It will hold a batch of approximately 4000 pounds of liquid milk. At the bottom of the pan is the steam chest or jacket into which low pressure steam is admitted to supply the heat for boiling the mass. The pan is attached to some type of vacuum system and a condenser which withdraws the vapor and determines the boiling point of the milk. This particular pan is not equipped with an agitator, however, some pans have this additional feature which enables greater heat transfer rates.

The second picture is that of a melangeur which is one type of equipment used to reduce the viscous condensed milk from the vacuum pan to a dry product and to incorporate the additional sugar, if any, and the chocolate liquor. A typical melangeur is about 6 feet in diameter and will handle about 400 to 600 pounds of dry product.

The third picture is of a spray dry plant and is characterized by the large cone or drying chamber which on a typical plant drying 15,000 pounds of liquid milk per hour would be approximately 12 feet in diameter and about 30 feet high.

The last picture is a typical atmospheric double roll dryer showing one side of the machine where the powder is removed from the operation with a screw conveyor.

As was stated in the beginning of this paper, its

purpose was to consider the processing of the milk itself for the manufacture of milk chocolate in order that we might look briefly at some of the complications involved in this one phase of the manufacture of milk chocolate. I hope, however, that while we have attempted to pull out the milk processing phase and look at it separately, it will be realized that this is still only one step in the manufacture of a finished milk chocolate product. We have previously heard a number of excellent papers discussed here on other phases of chocolate manufacture, for example refining, conching, tempering, etc. Each one of these processes assumes a vital role in the whole picture and further, is vitally affected by the processes which precede it. It would certainly, therefore, be a gross misunderstanding if any interpretations should be made as to which of these processes is more important than the other; for in reality, a milk chocolate product, like a chain, is only as good as its weakest part.

BIBLIOGRAPHY

- 1. Born, P. U. S. Patent 1,836,303 (1931).
- Hallquist and Campbell. U. S. Patent 2,519,833 (1950).
 Hollander, H. A. SPECIAL MILK POWDERS FOR MANUFACTURE OF MILK CHOCOLATE, Thesis—
- MANUFACTURE OF MILK CHOCOLATE, Thesis— University of Wisconsin 1949. 4. Hunziker, O. F. CONDENSED MILK AND MILK
- Hunziker, O. F. CONDENSED MILK AND MILK POWDERS, 6th edition, Hunziker (1946).
- Lea et al., Journal Dairy Research 14: 1 & 2 (1945).
 Otting, H. E. U. S. Patent 1,966,460 (1934).
 - U. S. Patent 2,169,278 (1939).
- 8. Otting, H. O. U. S. Patent 1,882,028 (1932)
 - Whymper, R. COCOA AND CHOCOLATE, 2nd edition J. & A. Churchill (1921).



MAXIMUM COVERAGE

from each pound of coating

Are you sure that you are covering as many centers from each pound of coating as possible? Many manufacturers are not and don't realize it.

Only the Stehling Mixer gives you a large supply of liquid chocolate, properly melted, properly manipulated, and held in suspension ready for the most economical coating operation.

Chocolate manufacturers use the Stehling Mixer as an emulsifier. The manufacturing confectioner also needs the emulsifying action to provide his enrobers and dippers with chocolate of original and uniform viscosity.

You can save money on coatings with a Stehling. Write today for particulars.

CHAS. H. STEHLING CO.

1303 N. FOURTH STREET

MILWAUKEE 12, WISC.

DI

for

th

lo

su

for

Factory Representative: R. S. and G. B. Hislop 1517 Grange Ave., Racine, Wisc.



You sure know your Hard Butter

-and we're hustling to meet the demand!

DIDN'T TAKE YOU LONG to find out that BEST FOODS makes a superior hard butter for confectionery coatings. Fact is, your demand for ESS-70 Double X got ahead of the supply.

We're happy to say that this shortage is temporary. Bear with this situation a little longer. We are just as anxious as you are to supply you all the ESS-70 Double X you want. More of better ESS-70 Double X coming your way!

- 1. HIGHER SOFTENING POINT—stands up in hot weather
- 2. LOWER MELTING POINT—melt-in-the-mouth quality
- 3. UNIFORM COMPOSITION—helps protect your product from oxidation, resists "bloom"

BEST FOODS

MAKERS OF THESE FINE PRODUCTS FOR CONFECTIONERY MANUFACTURERS

NUCOLINE · FILBISK · PLASTIC FILBISK

NEW YORK . CHICAGO . DALLAS . SAN FRANCISCO

The Control of Gloss

on Hard Butter Coatings

by JUSTIN J. ALIKONIS, Director of Research, Paul F. Beich Company

AM told that the "plain" people of Lancaster and near counties of Pennsylvania have a well deserved reputation for thrift and prosperity, and I am also told that the housewives are famous for their excellence in their cooking and the abundance of their tables. These people do not hide their eccentricities of dress or customs. They work hard, mind their own business and dare to be a little different.

That is why I feel that the people of Lancaster, the so-called Pennsylvania Dutch, would not be afraid to try hard butter coatings on condition that they can turn it to profit. I am reminded of a sign that you see on their roadside stands bearing this profound question, "Vy is it ve get so soon old und yet so late schmardt?" Nobody will dispute that we get "so soon old", and although modern science has been helpful to give us a longer life than our grandfathers, but they did not have to study the complexities and problems of the chocolate and confectionery industry. Today we are to study a problem that I am sure the Pennsylvania Dutch were not very concerned with, entitled "The Control of Gloss in Using Hard Butter Coatings." In the past 18 years I have been subjected to the term "gloss" as far as chocolate and "Chocolate Type" coatings were concerned. It has been in the last 10 years that a considerable portion of my own personal research time has been devoted to the retention of gloss, not only in chocolate coatings, but primarily in hard butter coatings.

Here again it is unfortunate that we do not have a word that is more descriptive, as the words hard fat are many times misleading. Vegetable and animal fats and oils are glycerides of fatty acid. If liquid at ordinary temperatures, the substance is termed an oil; if solid, it is called a fat. The common impression of a fat is something of a greasy nature, and the term "hydrogenated fat" is often confused with a substance of a plastic nature. The type of fats that are used for making coatings are hydrogenated fats, usually of

the high lauric families of fats which have the important application of "hardening of the fatty oils." With the great amount of research that has been performed in the last few years it has been possible to make these hardened fats in practically all ranges of melting points, and these have been termed as "hard butters."

It is not my intention to go into the chemistry and technology of fats and oils. I am referring in the outline to various excellent texts along these lines. For the short time that is allotted me I want to concentrate on the subject of gloss. What is gloss to one segment of American industry means one thing and to another segment of an industry can mean entirely something else. I do not care how Webster defines gloss, as that is something that could be confusing to our own industry. Gloss to the chocolatier and confectioner may vary in intensity, in quality, and in type, but there is no misconception as to what gloss means to the candy manufacturer, and you don't have to have an instrument to measure it when you

To obtain initial gloss on using hard butters in coatings is a fairly simple matter. It is not as critical as obtaining gloss in chocolate and cocoa butter type coatings. The problem to practically every manufacturer has been the retention of gloss. Therefore, we must study why we do certain things to obtain gloss and how it is possible to control it. Candy manufacturer's plants and procedures vary. They vary from a small manufacturer who manufactures his own coatings in limited quantities to one who manufactures a million or more pounds a year. It varies from one who buys a few pounds of coatings to one who buys it in tank wagon quantities and in carload quantities. Naturally, the handling for each individual manufacturer takes on a different set of problems. Yet, basically, each have a certain amount of fundamental problems that are the same, which have to be jug butter The

consid solid which fore, the se coolir the se hard temp Brab ment mate coole a Fa on a coati found ing t a ten

> state Th

the a ting gloss runn the e steel a pa a sto your hard prob this and min abou long at t read char plot in a

> in h T reta

be juggled in order to control the gloss on their hard

butter coatings.

The first fundamental principle that should be considered is that these hard fats have a liquid and solid phase and they react like any other material which occurs in the liquid and solid phases. Therefore, it takes a lot of heat to change a hard fat from the solid to the liquid phase and it takes prolonged cooling to change it completely from the liquid to the solid state. This is the reason it is important that hard butters have to go through a certain degree of tempering action. We have run these coatings in a Brabender Plastograph, which is a research instrument for checking the consistency or viscosity of materials, such as coatings, as they are heated and cooled through various cycles. This instrument has a Farinograph, which records the consistency curve on a graph. In studying the graphs of hard butter coatings and "Chocolate Type" coatings, we have found a delayed action of these liquid coatings wanting to go into solid state. We have also found that a tempered coating will go much faster into the solid state and that a seeded coating will do so even faster.

The study of these graphs gives us an insight into the actual role that tempering has in the proper setting of coatings, which is the key to the retention of gloss. You can find approximately the same data in running a cooling curve on any fat or coating, and the equipment that is needed is very simple, using a 400 cc container, such as a beaker of glass or stainless steel or a #302 tin can, a jacketed thermometer, and a pan of water that is at 60° F. If you cannot borrow a stop watch you can use a sweep second-hand on your wrist watch. You heat approximately 4 lb. of hard butter until it is melted. The 101° F. fat will probably be completely clear at 105° F. You place this beaker in a pan of constant temperature water and stir very gently and record the temperature every minute to begin with and as the fat becomes cloudy about every half minute. You take your readings until the fat has solidified to the point that you can no longer stir it. Now if you will examine this data you will find that the fat was actually a liquid and a solid at the same temperature. Now you can find out by reading a physics book that this was due to heat of fusion or heat of crystallization caused when the fat changed from the liquid to the solid phase. If you will plot the curve this will graphically present the data in a very interesting cooling curve. From studying the cooling curve, you will have 80% of your answer in how to retain gloss in hard butter coatings.

The other 20% of your answer that has to do with retaining gloss will depend on how you handle the coatings,

- the type of equipment, such as melting and cooling kettles,
- (2) whether you use tempering columns or Blommer tubes or the new Greer type melter to condition your coatings,
- (3) if you use the seeded-continuous feed method,
- (4) The production schedule and the supervision of your plant has a lot to do with gloss retention.



"BUSH" Manufacturing Chemists

Since 1851 we have specialized in the distillation of Essential Oils and the manufacture of Flavoring Materials and Food Colors, and over this long period have established and maintained a world-wide reputation for Quality.

SOME OF OUR SPECIALTIES

IMITATION PINEAPPLE FLAVOR 4253

One of our outstanding specialties, imparting the character of the true fruit, a real fresh pineapple flavor.

IMITATION COCONUT FLAVOR 4127

Accurately reproduces real coconut flavor. For all types of candy; a necessary ingredient wherever coconut is used; particularly valuable for reinforcing the flavor of shredded coconut.

IMITATION JAMAICA BANANA FLAVOR

This preparation gives the flavor and aroma of the ripe red Banana to a remarkable degree.

- Write for Samples and Full Directions -

W. J. BUSH & CO.

INCORPORATED

19 West 44th St.

New York 36, N. Y.

Chicago, Ill.

National City, Calif.



(5) the line up of equipment, such as pumps, gravity flow lines or the bucket brigade, also air-conditioning equipment or lack of it.

Thus, you can see from the above listed variables, we will have to juggle several balls at one time. If you are looking for the one best way of handling coatings that is entirely fool-proof then forget it. "There ain't no such animal." The best method is to adapt certain basic principles that are inherent to hard fats and coatings to your plant conditions, equipment and personnel. One method that might work in one plant may not be feasible in another candy plant. What we are all looking for is a gloss that has the shine similar to the one that appears on a blue serge suit that has been worn for several years. The ease of obtaining initial good gloss is what fools most coating operators. They have a perfect alibi "The goods had a nice shine when they came out of the cooling tunnel." There is a difference between high gloss and good gloss. Good gloss means the maintenance of the original appearance of freshness of the coating or good shelf-life. Good gloss is obtained by doing a lot of little things right, which means following the basic principles that are involved when a fat goes from a liquid to a solid. The gloss retention properties of coatings is due to the variation in its crystalline structure. The crystalline structure changes from one to another form when the coatings is subjected to certain temperature changes. The physical properties of coatings can be changed by simply varying heat and cooling treatment of the coating.

Another important factor to take into account is that you can usually blend fats of one manufacturer but it is not always good to interchange and blend competitive fats. Therefore, it is a very good idea to obtain the data from the manufacturers of hard butter as to the specifications and recommendations that are put out by the various manufacturers.

There are many ways of handling coatings, and it is not the purpose of this paper to discuss molded chocolate goods as these molded coatings will be remelted by the user and any gloss that is on the coatings is not necessarily an indication of the gloss that will appear on the finished goods. The salesmen of the coating manufacturers have put so much emphasis on gloss of moulded cake coatings they have created a "Frankenstein" and will have to contend with it. The appearance of gloss on moulded coatings is not necessarily important. It is how you treat the coating and put it on your own goods that is the proof of the pudding.

There are some manufacturers who go through a very complicated ritual in preparing their coatings for dipping their goods, and I am not one to argue with success, although a lot of hokus pokus in handling can be an added expense in these days of high prices, and most of us are interested in cutting production cost. It is my understanding that all basic manufacturers of hard butter for coatings deodorize and decolorize their hard butter at very high temperatures above 400° F. and subsequently, these fats are cooled and made into slabs, flakes, or delivered in tank cars or tank wagon deliveries. Thus, if heat

will done according to the coating tures normal long gealing gloss into gloss incompany to the coating ture of the coating tur

we s the l Leci ing butte facto cons are certa with of w and

Typ

the

Be

enro
that
man
metl
or f
Tub
90°
appl
is br
at t
caus
you
tals
seed
wan
are

Ir coat kett and agit wor and in a confille down thic tem

add

is ir

coat

for

will damage these fats the damage has already been done in their manufacture as there are no means of accomplishing the deodorizing and decolorizing at low temperatures. It is not necessary to actually melt coatings made by the manufacturer at high temperatures, but if occasionally higher temperatures than normal are exceeded there is no reason for alarm. The longer that coatings are held at just above their congealing point is certainly a point in favor of good gloss. Special treatment of the fat before it is made into coatings has very little to do with the finished gloss. Actually all emulsifiers work best if they are incorporated at temperatures of at least 160° F.

Before we go into the handling of these coatings we should discuss some of the ingredients other than the hard fat which can destroy gloss. The misuse of Lecithin and some of the emulsifiers can be contributing factors. Cocoa powder that has a higher cocoa butter content than 14% can also be a contributing factor, as any cocoa butter above the 7% level can be considered in a sense as free fat. If cocoa powders are used above the 14% level it is necessary to use certain emulsifiers to properly wed the cocoa butter with the hard butter vegetable fat. A certain amount of whole milk powder has a beneficial effect on gloss, and this is due to the butter oils that are present.

Practically 95% of dulling and sticking of "Chocolate Type" coatings and hard butter coatings are due to the mishandling of the coatings from their melting, enrobing, cooling and storing. There are two methods that have been worked out very satisfactorily by manufacturers in applying these coatings. In the Hot method the coatings are tempered in batch-kettles or fed through a tempering column or a Blommer Tube in which the coating is fed to the enrober at 90° F. for a 102° melt hard fat coating. The heat is applied to the enrober and the enrober temperature is brought up to 95° to 96° and the goods are coated at this temperature. I call this the Hot method because you are applying heat to tempered coatings and you are actually destroying some of the seeded crystals in the enrober, but a sufficient percent of the seed that has been melted has sufficient memory to want to go back to the solid phase, and good results are obtained in this manner.

In the Cold processing method a portion of the coating is produced as seed in a smaller revolving kettle with an agitator speed of 14 RPM, air cooled and the seed is produced in a minimum of 12 hours agitating in a room temperature of 70° F. In other words, the temperature of the mush is below 90° F. and after the seed is acquired it is held as a mush in a warm room or with some means of automatic control to avoid complete set. The enrober is then filled with the coating to be used and is brought down in the enrober to a point where it begins to thicken up. This point I call "receptive to seed." The temperature of this point is usually around 90° F. or below. Ten pounds of seed or approximately 5% is added to the enrober at this point. After this seed is incorporated in this enrober at the point where the coating in the enrober is receptive, a continuous

An italion...

to visitors
to the
Confectioners'
Convention

AMERICAN MAIZE-PRODUCTS COMPANY

cordially invites

its friends in the

Confectionery Industry

to visit us at

воотн 502

during the

CONFECTIONERY INDUSTRIES

EXHIBITION

CONRAD HILTON HOTEL,

CHICAGO

JUNE 7TH - JUNE 10TH

for flavors



that make



them ask



for more!

GIVAUDAN FLAVORS have provided keys to sales success for many manufacturers—of confections, ice creams, soft drinks, baked goods, puddings, cordials and other products.

Our chemists and flavor experts have developed a complete, quality line of basic flavor materials, natural fruit flavors and imitation flavors to meet every need. They will gladly help you select the right flavors for your products...or work closely with you to develop distinctive individual flavors to meet your special requirements.



330 West 42nd Street, New York 36, N. Y.

Branches: Philadelphia • Boston • Cincinnati • Detroit Chicago • Seattle • Los Angeles • Toronto stream of coating is fed in at about the melting point of the fat used in the coating, say 101° F. The enrober is being cooled constantly to maintain an enrobing temperature of about 95° F., and the coating is cut back by a pencil stream of coating at the continuous feed method of 101° F. If you lower the enrobing temperature then you must increase the continuous feed temperature, and if you lower the continuous feed temperature then you must correspondingly raise the enrobing temperature. This method gives a great deal of flexibility to operating temperatures and it is possible to obtain wide percentage coverage ranges from 25 to 35% with very good accuracy.

You can easily see that it is possible to adapt the tempering columns, the Blommer tube, the Greer unit, and other devices to this method. Extra gloss from the "seed-receptive to seed-continuous feed method," which I will refer to as the SRSC/FGC, the FGC means fine gloss coating, is maintaining the level in the tank holding the coating. This tank should not be emptied but always be made up with raw "Chocolate Type" coating. In other words, this holding tank of coating is continually being readied in a condition that is receptive to seed. Even at high temperatures of 101° F. there are a certain amount of high stearins that are beginning to take on seed nuclei.

Now that the goods are coated, the tunnel temperatures are very important. In the winter time when all the equipment is cold and outside temperatures have a tendency to cause you to operate in colder temperatures, you will probably want to operate about 10° higher as far as tunnel temperatures are concerned. In warm weather you will want to have your tunnels at about the same temperature as you enrobe regular chocolate goods. If you are obtaining a fuzzy gray or fingerprint marks on your goods shortly after they are enrobed, it is an indication that you are having your tunnel temperatures too cold and are obtaining case hardened goods in the tunnel, and you will have to raise your tunnel temperatures or apply heat to your coated goods just before they enter the tunnel.

In storing coated goods we must realize that hard butters, as was mentioned before, are slower to go into complete solid state. This has been the experience of practically every "Chocolate Type" coating manufacturer in setting up their 10 pound cakes. It actually takes two or three times as long for the coating on coated goods to go completely into the solid phase as with chocolate goods. This is a very important point to understand and keep before you as a basic principle of hard fats. Thus, it is important that you store your goods in not too cold a temperature for longer periods of time. The time necessary will depend on the amount of seed that you had in your enrober and the amount of molten coating that is still present in your coated goods after they leave the tunnel. The retention of high gloss in light "Chocolate Type" coating is much easier than the dark coatings, and the maintenance of gloss in colored hard butter coatings is easier than with the light chocolate type. This is primarily due to the contrast in colors. The use of certain Span and Tween emulsifiers in preparin ings in th that and water

Th ing e in co taine these coati sorbi ethyl furth the T that coati ties, is no cerne by n this impr coati of T the emu to be

ing

that

tion

for

paring water soluble colors for use in colored coatings will cut down fading and maintain good gloss in the non-chocolate type coating. It is important that you mix the emulsifiers with Propylene Glycol and heat it to 150° F. before adding the so-called water soluble colors.

The work on "Chocolate Type" coatings comprising emulsifiers, which was initiated in our laboratories in cooperation with the Quartermaster Food and Container Institute, showed clearly the advantages of these coatings. Current specifications covering the coatings for Army ration confections now call for 1/2% sorbitan monostearate (SPAN 60) and 1/2% polyoxyethylene sorbitan monostearate (TWEEN 60). In our further research work, which has been reported to the Task Committee on Confections, we have found that TWEEN 60 improves the palatability of the coatings but, due to its susceptibility to high humidities, it may cause certain loss of gloss. Although this is not objectionable insofar as Army rations are concerned, it might possibly be considered unsatisfactory by manufacturers of coatings for commercial use. In this connection we have found that a very definite improvement in the gloss retention of hard butter coatings is accomplished by lowering the proportion of TWEEN 60 and by a corresponding increase of the SPAN 60. We have also worked on some other emulsifiers that show promise but these will have to be cleared before data can be released. In discussing SPAN 60 and TWEEN 60 I want to emphasize that these ingredients are not yet listed in the Definition and Standards of Identity for any of the Cacao products, as their technological usefulness in these products was unknown at the time these standards were established. As is the case for any non-standardized food, including non-standard confection coatings, all of the ingredients thereof should be listed on the labels in the customary manner. I would suggest that you consult your counsel concerning the details of this procedure.

Those who have used the Span 60 and Tween 60 emulsifiers have reported conflicting data as to their effect on the viscosity of the coatings. We have heard reports where they have supposedly raised the viscosity and reports where they have lowered the viscosity. Both conditions are possible and whether it is chocolate or "Chocolate Type," it all depends on how and when these emulsifiers are incorporated in the coatings.

The effect of Span 60 and Tween 60, 50-50 mixture, additions on the viscosity of "Chocolate Type" coatings has been investigated by the Al-Chem Laboratory, Inc., of which I am Director, and the results obtained on Chocolate by the Atlas Central Research Laboratories as reported to me by private communication. It has been found that an increase in viscosity occurs, for the most part, where there is lecithin present and where the concentration of lecithin is near the maximum. Where there is no lecithin present, or where the concentration is low, the addition of the Span 60-Tween 60 combinations usually results in a viscosity lowering. Where it is desired to use lecithin for viscosity control, it has been found that by first adding the Span 60-Tween 60 to lecithin-



free or low lecithin-containing chocolate and then adding the lecithin; the desired viscosity can usually be attained. Best results seem to be obtained by adding the Span 60-Tween 60 mixture to the chocolate or "Chocolate Type" coating and heating as high as possible for at least two hours (milk coating not over 120° F.) or heating to 180° F. for 30 min. where the emulsifiers are added to cocoa butter or hard butter.

Span 60 alone has also been found effective as a fat bloom inhibitor and it can apparently be added to lecithin-containing "Chocolate Type" coatings with no effect on viscosity.

Our results, where the emulsifiers are added to the "Chocolate Type" coatings are as follows:

I. Plain coating Viscosity
490°M. (#27 wire, 4 CM immersion 20 RPM)

II. 0.5% Span 60 + 0.5% Tween 60 added to the coating 232°M.

III. 0.25% lecithin added to the fat, 0.5% Span 60 + 0.5% Tween 60 added to coating

Tween 60 added to coating 174°M.

IV. 0.5% Span 60 + 0.5% Tween 60 added with the lecithin 145°M.

V. 0.5% Span 60 + 0.5% Tween 60 added to the fat. 0.25%

60 added to the fat. 0.25% lecithin added to coating 132°M.

"It has further been observed that confection coatings comprising 1% of SPAN 60-TWEEN 60 combinations have consistently lower viscosities when remelted (5-15°M), as compared with the same coating compositions without the addition of the emulsifiers." Coatings with only lecithin usually give a higher viscosity when remelted.

We have tried to show you various methods to re-

tain good gloss as far as pre-conditioning of the coatings, tempering, cooling, and storage of the coated goods. The very important factor that cannot be overlooked is the effect of varying relative humidities which with heat gives different percentages of sugar bloom along with the fat bloom. If you will place at room temperature unwrapped coated goods along with those wrapped with glassine, in semi-moistureproof-cellophane and in moisture-proof cellophane and in aluminum or Saran low vapor transmission wrappers, I am sure you will find some very interesting results. In our test we have found that the glassine and semi-moisture proof cellophane will give the best protection to the gloss of coated items. This is apparently due to the fact that the package is allowed to breathe and thus forestall any condensation taking place on the coating. The biggest problem in the use of hard butter coatings is the retention of gloss in the chocolate type unwrapped coated goods. The varying changes in humidity causes condensation which causes these goods to dull after about a 30 day exposure. Some protection is needed in storage to obtain maximum gloss when the consumer receives the goods.

ACKNOWLEDGMENTS:

Thanks are due to Kees Paulussen, Chemist, Kwatta Chocolate, Breda, Holland, who as a member of an NATO team ran many research projects on coating at the Al-Chem Laboratory, Inc. and to Harold Hillman, Chemist, Paul F. Beich Company for his work on experimental batches and evaluations.

-the end

b

fo

hi cl si

CI

ra

19 w

d

th in m

la

d

fe



APPLE PRODUCTS

the Standard of Quality for sixty years

NUTRL-JEL

for preserves, jams, jellies, marmalades

CONFECTO-JEL

for jellied candie

confecto-Jel—a buffered apple pectin mixture for jellied candies—ready for use.

CONCENTRATED APPLE JUICE

Plants in Apple Regions From the Atlantic to the Pacific

SPEAS COMPANY, General Offices, Kansas City 1, Missouri

Studies on Shelf Life of

n

est

gen

Coconut Bars

by H. B. Cosler, Technologist, Quartermaster Food & Container Institute

WHEN the military specification for candy and chocolate confections, MIL-C-10928 (QMC) was completed in February 1951, formulas for a coated coconut disc with a rather low coconut content, and for a coconut bar with a rather high coconut content were included. The latter formula was similar to the type used in commercial coconut bars. Large procurements of each of these as ration components were made in 1951. Before many months, or even weeks had elapsed there were some disturbing developments. No difficulties were encountered with the disc at that time, but in some instances the bars developed a moldy taste and smell even before being assembled into the ration.

Samples were examined in our laboratories but no evidence of mold growth was discovered. They were also analysed and the results did not show the peroxide values or free fatty acids high enough to be alarming. It was thought that the off taste and smell might be

caused by an enzyme in the coconut. As some manufacturers use a cold process in making bars, if an active enzyme was present it would not be inactivated at the low temperature. Samples of coconut were obtained from three processors and our laboratories spent considerable time in trying to determine whether or not fat splitting enzymes were present in the coconut. After conducting these tests they felt reasonably sure that they were not present.

Pre-award samples had been received in the spring of 1951 in reply to invitation to bid for ration components. Included were coconut bars from several manufacturers. These bars were kept in boxes and stored at room temperature. They were examined at intervals over a period of one year with rather surprising results. Most of them remained in fairly good condition, and although not like fresh coconut bars, were very edible even after one year. A few were in very bad condition and inedible.

Again, those had a moldy smell and taste. This seemed to occur only with the bars made by manufacturers using the cold process. This was probably a coincidence, as future tests seemed to prove. Enzymes are difficult to segregate and we were still of the opinion that possibly this deterioration might be caused by an unknown enzyme.

Several of the technical men of different companies making coconut bars were contacted for help in solving this problem. They were all most cooperative but none had a definite solution. In two or three instances they made up samples for us to use in storage studies incorporating their ideas as to how to overcome our difficulty. Meantime, coconut bars and discs were removed from further ration procurements.

We were primarily interested in producing coconut bars which would meet the stability requirements of the armed forces. From storage tests on pre-award samples we believed this could be accomplished. Our approach to this was to formulate bars using the best of raw materials, with and without the addition of new materials which might increase the shelf life. Formulas for six bars and two discs were developed and two manufacturers cooperated in making them. It was hoped that at least one would meet the stability requirements. If, in the course of conducting the storage tests, the reason for the rapid deterioration of some bars could be discovered. all well and good, but our object was to develop a stable coconut

An antioxidant mixture consisting of 20 parts butylated hydroxyanisole, 4 parts citric acid and 6 part propyl gallate dissolved in 70 parts propylene glycol, was added to six types to prevent oxidative rancidity. Products of hydrolysis of coconut oil are glycerine and free fatty acids. If hydrolysis occurred, it was thought that the addition of glycerine might stop or retard the reaction. Also, some of the free water might be held by the addition of sorbitol.

The bars and discs were made in accordance with the formulas and coded as shown in Table 1.

Manipulation of each type was as follows:

Ac manipulation. All materials except coconut were mixed with water and cooked to 230.5° F. The mixed syrup was cooled to 112° F. and the coconut mixed in. The temperature dropped to 94° F. The mix was spread, cut into bar size and coated.

As manipulation. Sugar, corn syrup, salt and water were cooked to 235.5° F. The sorbitol, glycerine, and antioxidant were mixed, coconut added and thoroughly mixed. The cooked syrup was cooled to 110° F., the wetted coconut added and mixed. The temperature dropped to 87° F. The mix was spread, cut into bar size and coated.

Bc and Bs were both fondant type batches:

Fondant (both Bc and Bs)
Sugar 40.16
Corn Syrup 4.84
Cook to 237° F., cool and cream.

SAVAGE LATEST FIRE MIXER

sug

and

the

hea

wa

coc

Th

TIM

Th

ba

po

24

th

1

MODEL S-48

Thermostatic Gas Control—Variable Speed



The Savage Latest Fire Mixer, Model S-48, is Streamlined and Sanitary and has many new features and conveniences:

Automatic Temperature Control
Variable Speed from 30 to 60 RPM
Break-back within floor space 32" x 48"
Aluminum Base and Body Castings
Atmospheric Gas Furnace with Stainless shell
Removable Agitator, single or double action
Stainless Cream Can and Stainless Drip Pan
Copper Kettle 24" diameter 12½" deep or 16" deep

You can save labor and obtain uniform batches by setting the thermostat for degree cook desired. It cooks and mixes batches of caramel, peanut brittle, peanut candies, fudge, nougat, gum work, and with double action agitator is ideal for coconut candies and heavy batches.

Your inquiry invited

Visit us, BOOTH 206, NCA Exposition, Chicago, June 7-10

SAVAGE BROS. CO.

2638 Gladys Ave.

Chicago 12, Ill.



Bc manipulation. The invert sugar, 17.25 pounds of corn syrup and salt were cooked to 220° F., the fondant added and mixed and heated to 220° F. The antioxidant was mixed in the batch then the coconut was added and mixed. The temperatures were as follows:

ERATURE	°F.
220	
160	
152	
	160

The mixture was spread, cut in bar shape and coated.

Bc manipulation. Sorbitol, 12.23 pounds of corn syrup, and salt were cooked to 222° F., the fondant added and mixed. This cooled the mix to 125° F. The antioxidant and glycerine were mixed and the coconut added and this mixture added to the warm mix. The temperature dropped to 105° F. The mixture was spread, cut into bar shape and coated.

Cc and Cs manipulation. A fondant of 80 parts sugar and 20 parts corn syrup was mixed with half its weight of soy mazetta. The remainder of the sugar and corn syrup and the salt was cooked to 242° F. and the fondant added. Fondant constituted 1/3 and the cooked batch 2/3. In the Cc batch the coconut was mixed with the invert sugar and emulsifiers, warmed and added to the cooked batch. In the Cs batch the sorbitol and invert sugar was cooked with the sugar and corn syrup. The coconut was mixed with the glvcerine and emulsifiers, warmed and added to the cooked batch. The temperature of the batch was at 175° F. at the time of casting.

The only difference in the Dc and Dh batch is manipulation. Sugar, corn syrup and salt with a little water was cooked to 232° F. Enough syrup was cooked for both batches. The syrup for the Dc batch (cold processed) was cooled to 112° F., and the coconut added. The temperature dropped to 93° F. The batch was spread, cut into bar shape and coated. In the case of the Dh batch (hot processed) the coconut was added to the hot syrup (232° F.). The temperature dropped to 195° F. After 20 minutes the batch was spread, cut into bars and coated. These two bars have no antioxidant, sorbitol or glycerine added. The formula is very similar to several commercial bars. The purpose of testing these was to determine whether or not subjecting the coconut to heat had any effect on the shelf life.

All of these bars were coated with the dark sweet chocolate type heat resistant coatings as specified in the military specifications for candy and chocolate. They were made in September 1952 and delivered to the Food and Container Institute. Here they were sealed in cans, 5 bars or discs in each

	4.2	BLE I					
FORMULA DISCS							
Ac	As	Be	Bs	Ce	Cs	De	Dh
20.08	16.06	40.16	40.16	42.0	42.0	20.08	20.08
		5.02		5.0	5.0		
47.18	41.16	22.09	17.07	32.0	22.0	47.18	47.18
	32.12	32.12	32.12	20.0	20.0	32.13	32.13
	0.61	0.60	0.60	0.6	0.6	0.61	0.61
0.01	0.01	0.01	0.01	0.01	0.01		
	5.02		5.02		5.0		
	5.02		5.02		5.0		
				1.0	1.0		
11.69	11.68	9.31	9.58			10.79	10.79
9.87	9.28	8.36	8.46	7.69	6.91	9.12	9.17
	20.08 47.18 32.12 0.61 0.01	20.08 16.06 47.18 41.16 32.12 32.12 0.61 0.61 0.01 0.01 5.02 5.02	20.08 16.06 40.16 5.02 47.18 41.16 22.09 32.12 32.12 32.12 0.61 0.61 0.60 0.01 0.01 0.01 5.02 5.02	Ac As Bc Bs 20.08 16.06 40.16 40.16 5.02 47.18 41.16 22.09 17.07 32.12 32.12 32.12 32.12 0.61 0.61 0.60 0.60 0.01 0.01 0.01 0.01 5.02 5.02 5.02 5.02 11.69 11.68 9.31 9.58	20.08 16.06 40.16 40.16 42.0 5.02 5.0 47.18 41.16 22.09 17.07 32.0 32.12 32.12 32.12 32.12 20.0 0.61 0.61 0.60 0.60 0.6 0.01 0.01 0.01 0.01 0.01 0.01 5.02 5.02 5.02 5.02	Ac As Bc Bs Cc Cs 20.08 16.06 40.16 40.16 42.0 42.0 5.02 5.0 5.0 47.18 41.16 22.09 17.07 32.0 22.0 22.0 32.12 32.12 32.12 20.0 20.0 20.0 60.0 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.0 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Ac As Bc Bs Cc Cs Dc 20.08 16.06 40.16 40.16 42.0 42.0 20.08 5.02 5.0 5.0 47.18 41.16 22.09 17.07 32.0 22.0 47.18 32.12 32.12 32.12 20.0 20.0 32.13 0.61 0.61 0.60 0.60 0.6 0.6 0.61 0.01 0.01 0.01 0.01 0.01 0.01 5.02 5.02 5.0 5.02 5.0 1.0 1.0 1.0

C-Chemical Tests S-Sensory Tests (Acceptability)

TABLE III

Code	ACCEPTANCE—HEDONIC SCALE											
		Initial			Constant 100° F. Storage							
				3	3 months 6			month	s	9 months		
			% Dis-			% Dis-			% Dis-			% Dis-
	Rating	Rank	like	Rating	Rank	like	Rating	Rank	like	Rating	Rank	like
Ac	6.3	8	16	5.7	8	. 30	6.3	4	10	5.9	6	21
As	6.8	3	7	6.6	3	10	6.2	5	20	6.1	4	21 21
Be	7.6	1	0	7.3	1	3	6.8	2	10	7.3	1	0
Bs	7.3	2	2	7.3	1	0	7.2	1	3	6.8	2	18
Cc	6.5	2 7	12	6.1	6	22	5.8	7	33	5.0	8 7	43
Cs	6.6	6	12	6.3	4	23	5.6	8	33	5.1	7	0 18 43 39 21
De	6.8	4	12	6.3	4	13	6.0	6	23	6.0	5	21
Dh	6.6	5	9	6.1	6	27	6.8	3	3	6.4	3	18

Percent Dislike is the percent of the total testers rating the product 5 or below.

TABLE IV

ACCEPTANCE HEDONIC SCALE										Moisture	
	Initia			12 1 70° I	nonth 7. Cor		12 mor loose ered Room	cov-		12 months in loose cov- ered boxes Room storage	
Code	Rating		% Dis- like	Rating	Rank		Rating	% Dis- like	Initial		
Ac	6.3	8	16	6.5	4	21					
As	6.8	3	7	6.9	3	4					
Be	7.6	1	0	7.4	1	4	6.4	23	8.36	5.93	
Bs	7.3	2	2	7.4	1	4	7.2	7	8.46	6.78	
Cc	6.5	7	12	6.2	5	25	4.9	47			
Cs	6.6	6	12	5.9	5 8	18					
De	6.8	4	12	6.0	- 6	25	5.4	37			
Dh	6.6	5	9	6.0	6	21					

Room storage temperature varied from 65° F. to 100° F. The summer period had 42 days of over 90° F.

or

can. A few of each were left in boxes and stored in the stock room. This room was not air conditioned and temperatures varied from 65 at night in winter to approximately the outside summer temperatures. The summer of 1953 had over 40 days of above 90° F. The necessary number of canned bars and discs for testing were stored in the 100° F. and 70° F. rooms.

The storage tests were set up according to Table II.

The chemical tests were run on both centers and coating. On the centers, moisture, peroxide values, free fatty acids and carbonyl values were determined. Except for the moisture the same analyses were made on the coatings.

The sensory tests for acceptability were based on the 9 point scale which is as follows:

- 1 Extremely Poor
- 2 Very Poor
- 3 -Poor
- 4 Below Fair, Above Poor
- 5 Fair
- 6 Below Good, Above Fair
- Good
- 8 Very Good
- 9 Excellent

The taste panel consisted of 40-

41 testers on the initial test and 30 to 31 on subsequent tests.

ale

an

Bo

hi

ha

ra

as

th

sh

ah

co

as

as

di in

sil

or

er or

th

th

th

lo

R

ch

T

cl

fe

to

af

in

CO

Samples of the coconut used were received from both factories cooperating in making the bars and discs. These were analysed with the following results:

Moisture %	3.09	2.98
Peroxide Value	None	None
Free Fatty Acid %	0.11	0.08
Carbonyl Micromoles	0.75	0.77
Gram Fat		

The analysis furnished by the processor of the coconut was as follows.

Moisture	%						0				3.2
Peroxide	V	alu	e					0		0	None
Free Fatt	hv	Ac	id	S	9	5			_		0.085

The laboratory of one of the bar manufacturers analysed the coconut for free fatty acids and found

Special attention is called to the analysis of the coconut as it is believed to have an important bearing on the shelf life of the finished bars.

Results of the chemical tests at the different examinations will be discussed very briefly. The reason is that there seemed to be no significant differences indicated by these tests. Moistures remained almost constant in the bars and discs stored in the sealed tin containers. This would be expected as the moisture could not escape.

Much of the value of any food is its acceptability. If this could be correlated with chemical tests, much time and trouble could be eliminated in determining acceptability, by making only chemical tests. No such correlation developed in the tests of the coconut bars, therefore, in this case we must depend on taste acceptance



CHOCOLATE COATINGS

We will be pleased to have your request for samples and information. Address: Dept. C 1

AMBROSIA CHOCOLATE COMPANY MILWAUKEE, WISCONSIN Celebrating 60 Quality Years

CONVEYORS

Corrigan bulk dry sugar handling and storage systems convey sugar from unloading point to storage and from storage to production.

Improve production facilities Lower operation costs

J. C. Corrigan Co., Inc. 41 Norwood St., Boston 22, Mass.

alone. The results of the taste tests are shown in Tables III and IV.

It should be noted that the bars Bc and Bs in all tests rated the highest. The Ac, As, Dc and Dh bars were very close in their ratings. This would be expected as the formulations were very near the same. Both the Cc and Cs discs showed steady deterioration and were the only ones rated unacceptable after 9 months at 100° F. The coconut could not be responsible as the discs contained less than 2/3 as much coconut as the bars. The discs were the only ones containing a whipping agent and emulsifiers and it is possible that one or both of these deteriorated. Several of the taste testers commented on off flavors in the later tests of the discs. The off flavors were not the moldy flavors encountered in the ration procurement bars.

Only 4 bars which were in loosely covered boxes and stored at room temperatures were tested. Ration foods are always packed in moisture, vapor proof containers. These 4 were tested as a check to determine whether or not deterioration would occur when the bars were exposed to climatic changes. In this case the deterioration was probably due primarily to moisture loss. This is shown in Table IV.

The Bc and Bs bars which had almost identical ratings in the closed container tests are quite dif-

ferent in this test. The Bs bar, which is the one containing sorbitol and glycerine, rates as high after 1 year open storage as at the initial test. As no bars were tested

containing only sorbitol or glyc-

erine it is not known whether this is due to one or the other or a combination of both. Both are humectants and would retain moisture. It is surprising that a coconut bar could be made that would maintain such a high degree of acceptability after a year's storage

> The coatings at both room storage and 100° F. continuous storage conditions remained in excellent condition. There was no evidence of any sticking to the wrappers and

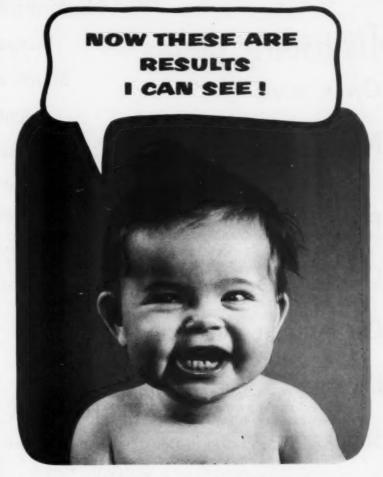
under such conditions.

the finish was not dull or grey.

Based on the results of these tests the coconut bar will be recommended for procurement in rations. However, the coconut requirements will be much more stringent and will probably correspond to the following:

..... Not more than 3.5% Peroxide Value ... None Free Fatty Acid... Not more than 0.10% pH Not less than 6.0

The coconut must be free from off flavor or odors and contain no



Improved eye-appeal - added sales-appeal are the results you see in products using ...



Peacock Brand

CERTIFIED FOOD COLORS

Manufactured and Distributed by Wm. J. Stange Co. Oakland 21, California Chicago 12, Illinois In Canada: Stange-Pemberton Ltd., New Toronto, Ont.



RUGGEDLY CONSTRUCTED FOR LIFE TIME WEAR. FULLY APPROVED BY HEALTH AUTHORITIES.

The Standard Casing Ce., Inc. 121 Spring St., New York 12, N. Y

CARAMELS

LOZENGES

CINGS

CLINTON

Standardized

Syrups

And

for all

types of

Quality

Confections

Starches

Dextrose

Nougats

TOFFEES

OPERA CREAMS

Nonpareils

Fudges

ORANGE SLICES

OLD FASHIONED TAFFY

DIVINITIES

SUCKERS

CLINTON FOODS INC.

Corn Processing Division
CLINTON, IOWA

TALIAN BONBONS

NUTTY PRALINES

CHOCOLATES

specks or foreign material. The color must be white.

The formulation and processing may also be specified inasmuch as the centers made with fondant were superior in initial acceptance and stability to the other types. Glycerine, sorbitol and antioxidants probably will not be specified as they did not extend the shelf life of the coconut bars when packed in tight containers.

Conclusions

1. Coconut bars can be made which in closed containers will remain stable for 9 months at 100° F. continuous storage and for one year at 70° F. continuous storage. Bars can also be made which will remain stable for one year when stored in loosely covered boxes at room temperature.

2. When the coconut used is of high quality a coconut bar of good stability can be produced. From the results of these tests it might be inferred that previous difficulties with coconut bars resulted from the use of inferior quality coconut.

3. The addition of antioxidant to coconut bars is unnecessary. It would appear that oxidative rancidity is not a problem.

4. There is no apparent benefit in the addition of a combination of glycerine and sorbitol when the bars are kept in sealed packages or containers. Hydrolysis does not appear to be a problem. When stored in loosely covered boxes the addition of a combination of glycerine and sorbitol was of very definite benefit in extending shelf life due to moisture retention.

5. Enzymatic action did not appear to occur in coconut bars as there was no difference between the hot and cold batches.

ANALYTICAL METHODS USED

Moisture—Association of Official Agricultural Chemists Methods of Analysis, 7th Ed., Par. 29.3.

Free Fatty Acids—Methods of Analysis, 7th Ed., Par. 26.30 (Modified) Peroxide Value—Oil and Soap 9 89

(1932). Carbonyl Value — Analytical Chemistry

Carbonyl Value — Analytical Chemistr 23. 541 (1951) (Modified).

REFERENCES

Progress in Candy Research, Reports Nos. 24, 25, 26, and 27. National Confectioners Association.

The Handling and Delivery of

Liquid Chocolate

by Warren L. Newcomer, Vice President, Wilbur Suchard Chocolate Co.

Within the past few weeks my attention was called to the following item that appeared in one of our national magazines. It is a claim made by one of the leading airlines to substantiate their assertion of speedy delivery in this day of atomic missiles and jet power. The item is as follows: "It was announced today by (so and so) airline that they have been successful in shipping a pair of rabbits from Los Angeles to New York with such great speed that upon arrival at New York City the crate was opened and found to contain only the original pair of rabbits."

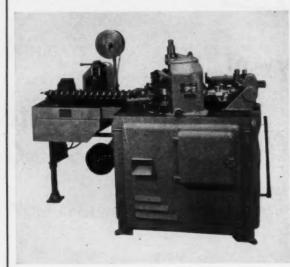
Now we make no claim for speed. And I am sorry to have to report to you that up to the present time our English Friends have found no way to reproduce cocoa beans with the same rapidity with which I am told one can obtain rabbits. There is, however, a notable recent development in relation to the shipping and handling of chocolate coating which has been a real contribution to the transportation field, and I am sure must be examined with interest by producers of similar commodities in other industries. I refer, of course, to the development the chocolate industry has made in the transformation in the handling and delivery of chocolate coating. For a discussion on this subject we can say that chocolate liquor, cocoa butter, and cocoa coating are synonymous with chocolate coating, as the problems, advantages and disadvantages applicable to chocolate coating apply equally as well to these commodities. These commodities which have always been moulded in solid form are now being delivered to customers in a liquid or paste state through the use of tank trucks. While this transformation is not general; that is to say, it is not applicable to all deliveries of the commodities; there is a growing demand for deliveries in this form.

With this transformation, the industry is faced with a complete reversal in relation to the conditions necessary for shipping the commodities. We are no longer concerned with the protection from heat as is necessary when shipping in moulded form, but rather we are concerned lest the heat escape from the commodity, thus preventing our customer from receiving it in a liquid state. These conditions have created new requirements and problems for the manufacturer and the consumer of our commodities. It would be well, therefore, to examine the subject "The handling and delivery of Liquid Chocolate" from the viewpoint of first, the manufacturer; second, the consumer; third, the transportation facility; and last, to list some of the advantages and disadvantages to be received through the use of tank truck deliveries. Manufacturer

The transformation in the shipping of coatings in tank trucks presents no great problems to the manufacturer. It is a comparatively easy matter to consider the manufacturing to have ended at the stage in processing before moulding. The cocoa beans have been roasted, cleaned, and milled. The other ingredients have been added in mixing. The coating has been refined and standardized to the proper viscosity. It is at this place of the manufacturing operation that the manufacturer can now withdraw his finished product for liquid delivery. His work-in-process inventory

Latini's Latest Profit Maker

AT N.C.A. Booth 406



Latini Die Pop Machine With Continuous Wrapping Attachment

You can now make and wrap pops in a continuous operation—and they're not just pops—they're LATINI DIE POPS.

200 wrapped Die Pops per minute require only one operator: the spinner.

The wrapped pops go right through for cooling, then packing.

There is no handling, chipping, breaking, etc., which all means dollars and cents to you.

In addition, the sandwich wrap saves cellophane
—uses about 50% of other type wraps.

It All Adds Up To Profits With A Quality Item.

Chocolate Spraying Co., Inc. Chicago, Illinois

Representative:

John Sheffman, Inc.

152 W. 42nd St.

New York 36, N. Y.

has become his finished-stock. Since he has already provided means for transporting or conveying his work-in-process, there is no problem in transporting or conveying it to the tank truck rather than to the tempering kettles or moulding unit—which would be his next operation were he preparing for shipment in ten pound cakes.

If this same coating were to go to his customer in ten pound cakes it would be deposited into moulds on an endless conveyor passing through an enclosed cooling tunnel. The demoulded cakes are fed into a wrapping machine. From the wrapping machine each ten pound cake is placed in a carton holding five cakes, or a burlap bag holding 20 cakes. The cartons must be glued, the bags must be sewed, and they must both be properly marked for identification. These shipping containers must, in turn, be transported to a proper storage space to await shipment to his customer. When the shipment is made up, they must be moved from the storage space to the shipping platform and, in turn, loaded on the shipping vehicle. These are the operations that are eliminated when shipping by tank trucks.

When shipping moulded chocolate in fifty pound cartons, 500 shipping containers must be handled; and when shipping in 200 lb. bales, 125 containers must be handled; to obtain a shipment of 25,000 pounds.

Since the moulding operation is eliminated entirely in the operation, the manufacturer has a sizable investment in a moulding unit which is no longer necessary for his production facilities. He will have to install in the place of the moulding unit, facilities in the form of tanks-such as the Stehling type-to hold the coating until the arrival of the truck for transporting it. The capacity for storage facilities will, of course, depend upon the anticipated shipping or customer requirements. The location of these storage tanks should be such that the distance to the loading station is kept to a minimum. Water-jacketed or heated piping will be necessary if the loading station is some distance from the holding tanks and if the loading station will be exposed to unduly low temperatures during cold weather.

The manufacturer's plant now becomes closely tied in with the production facilities of his customers. In order that there will be no delays in shipping, production schedules must be well planned.

The coating goes into the tank truck at approximately 120° to 130° F. The loading time will depend upon the location of the loading dock in relation to the holding trucks. The time for loading will average about thirty minutes.

Consumer

A consumer of moulded coating will receive from his supplier either the 500 cartons or the 125 bales which we just discussed. He will move them from the truck. These containers will then be moved from the receiving platform to the storage space. They will be moved from the storage space to the melting kettles. Each of the 500 cartons or 125 bales will be opened, and each of the 2,500 ten-pound cakes will be broken and thrown into a melting kettle.

If the consumer is set up to receive liquid coating, in about thirty minutes he will pump 20,000 to 25,000 pounds into his melting kettle and eliminate all of the aforesaid operations.

Since liquid coating is transported in quantities between 20,000 pounds to 25,000 pounds, it is obvious that the quantities of coating that are consumed will be an important factor when consideration is given to the installation of a system to use liquid coating.

The ideal installation will provide storage facilities for a minimum of 50,000 pounds. This is the equivalent of two truck loads and should eliminate the close scheduling of deliveries. It will eliminate delays in unloading because the facilities are not available to handle 25,000 lbs. at one time. It will also provide insurance against running out of coating because of delays in delivery due to traveling conditions on the highway.

The manufacturer can offer to the consumer some co-operative help in planning the installation as in all probability he has had experience in storing and handling liquid coating.

A typical installation may be described as follows: Two U-shaped tanks partially jacketed have been provided. Each tank has a capacity of 28,000 lbs. A space about 14 ft. by 18 ft. by 9 ft. high is required. The installation has provided two pumps (one a spare for breakdowns) to pump in and out through a four-inch line. All piping has been jacketed or wrapped with electric heating elements. The approximate cost is \$13,000 to \$15,000.

Trucking Facilities

is

ng

10

nt

in

ds

 $^{\rm ed}$

to

ne

19

he

nd

n.

IS-

nt

ey

ng

le.

en

nd d:

ers 00

n.

ole

er

ve

ies

-to

or

ies

ng

or-

he

ed

ng

nd

W

ed

In

ro-

xi-

nd

to

ge

om

les

the

vill

ing

be

vill

ER

Of mutual interest to both the manufacturer of the chocolate coating and to the consumer of the chocolate coating will be the facilities for transporting the commodity. These facilities now become the storage space for the work-in-process inventory of both the manufacturer and the consumer. It is a comforting assurance to both the manufacturer and the consumer to feel that they have a reliable trucker, with proper facilities, and to know that they are not going to have a 25,000 pound solid chocolate bar located somewhere on Route #72.

The vehicle itself probably cannot be distinguished from the ordinary tank truck we commonly see on our highway every day. It is supplied by a trucking firm who has specialized equipment for the job.

The geographical location of the manufacturer and his consumer will determine the requirements necessary for holding the temperature of the commodity. For a short haul a well insulated tank truck will probably suffice. If the truck does not contain its own heating unit it may be necessary for the manufacturer to provide facilities to blow hot air into the truck before loading it.

The best possible service can be given to both the manufacturer and the consumer who is properly supplied with trucks which have their own self-contained heating units. Since this type of truck is readily available to the industry today, it is not necessary to elaborate on its construction. Experience has shown that the truck with its own heating unit gives satisfactory service under all conditions. These trucks have



The pre-eminent candy makers of the nation have tested "BURCO" Products and found that they are outstanding. You, too, will find them reliable, economical producers of repeat business.

Outstanding formula using NU-KREME

We recommend that you try NU-KREME, the Grade A of all nougat creams. An outstanding formula for Swiss Hand Rolls using Nu-Kreme is: 13 lbs. NU-KREME placed in a kettle cold. Add 1 lb. melted butter and mix with paddle until incorporated. Add 7 lbs. melted Milk Chocolate Coating and 3 teaspoons of Salt. Stir with paddle until coating is thoroughly mixed. Let batch stand over night. Hand roll and dip the following morning in dark or milk coating.

CONFECTIONERS' PECTIN for cut slab

NU-MILK Whole Milk in Plastic form for Caramels and Fudges.

FRESH COCOANUT PASTE Ready to use for Chocolate or Bon Bon Centers.

PECTOLENE a Pectinized Invert Sugar Product.

CENTER-ROLL KREME for Soft-flowing Creams.

KREME-TEX for Creamy Fudge and Caramels.

DIPPING PIECES Molasses Honey-comb Chips, Peanut Butter Chips, Toasted Coconut Chips, Chocolate Center Chips, Almond Butter Sticks, Mint Pillows and Peanut Butter Pillows.

BURCO NOUGAT CREME The All Purpose Nougat Cream.

TOPPINGS Marshmallow, Butterscotch, Caramel and Chocolate Fudge.

Formula Book "RECIPES FOR BETTER CANDIES" sent with initial order

BURKE PRODUCTS CO. INC.

317 W HUBBARD ST. CHICAGO IO ILLINOIS



proven satisfactory for distances up to 750 miles. They have been available for the past several winters and have been well tested under all weather conditions.

tor

pri

me

co

A reliable trucker will be sure that he is supplying trucks which will pass a rigid inspection before loading, for moisture, odors and cleanliness.

Since the truck becomes the shipping carton, it is imperative that an accurate scale for weighing be provided. All trucks should be weighed on a scales that is checked frequently for accuracy and that is equipped with the proper recording devices.

The truck should provide openings for scraping down the sides so that a minimum of residue remains in the truck after the unloading operation has been completed.

Advantages and Disadvantages

What may be an advantage to the manufacturer could be a disadvantage to the consumer, or the reverse conditions could exist. All the advantages and disadvantages should be examined and evaluated according to the conditions existing in your plant.

A multitude of operations in packaging and handling will be eliminated in the plants of both the manufacturer and the consumer when liquid coating is used. These operations were all listed when we discussed the subject in relation to the manufacturer and the consumer. These eliminations will result in labor savings.

Since it is not necessary to use cartons and paper for packaging liquid coating, this item will be saved entirely. Since the materials are not used there will be no salvage value to the consumer of the coating.

Through the elimination of finished stock storage, valuable refrigerated storage space will be available for other purposes or can be eliminated entirely.

Geographical location of the manufacturer and the consumer can be an advantage or a disadvantage. There is a point of no return in relation to distance. As the truck will contain no cargo on the backhaul, the freight rate in longer distances will be greater than the savings to be realized from tank delivery. The following approximate rates will give you an idea of the freight rates in comparison with moulded chocolate:

	Point A	Point B	Point C
Moulded-Rail	26	51	91
Moulded-Truck	33	60	1.10
Tank-Truck	35	75	2.50

All rates are per 100 pounds, and it should be noted that rail rates are for carload lots. From the above you will readily see that trucking liquid coating long distances becomes quite expensive.

The manufacturer will not be able to offer as wide a variety of coatings in liquid form as he now offers in moulded form. The consumer may not be able to be as flexible as to source and variety of coating he has available in moulded form if he switches to tank deliveries.

The manufacturer will require less working capital to produce liquid coating—he will require less finished stock inventory. The consumer may require more working capital since he must carry a small inventory of solid chocolate for emergency use.

There are no opportunities for aging chocolate. Tank truck deliveries are used for the moderately priced, good quality coatings.

Trucking strikes and labor disputes can be a serious matter in a short time when working with a hand to

mouth inventory.

nd

d-

it

es

is

IS

n

d

Floor load requirements for large storage tanks are greater than for moulded chocolate stored in the usual manner. At the same time, more coating can be stored per square foot of floor space.

The entire operation in producing, delivering, and consuming liquid coating is more sanitary than moulded form. We have truly reached the point where the coating will be entirely untouched by human hands. Liquid coating is not subject to dust and lint from canisters. It is handled in a completely enclosed system.

It is generally believed that a more uniform quality of coating is available in tank deliveries. The danger of scorching and of shock is eliminated when melting is eliminated.

Summary

These are the items to be checked thoroughly, and investigated in relation to the conditions in your plant. Circumstances in each plant will vary the conditions, and it is not possible to state the exact savings for all locations and circumstances; however, it is generally believed that savings up to one and one-half cents per pound can be made where the installation is practical.



Carlson CHERRY DIPPER

- High production machine for dipping cherries
- Simple design rugged construction
- Easy to operate
- Requires only one person to do two to three times the work of a fork dipper
- Double boiler with built-in heating element, extra.

For full information write

THORNTON - CARLSON

2771 E. Foothill Blvd. Pasadena 8, California



The MANUFACTURING CONFECTIONER'S

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

Marshmallows

Code 6A4
Assorted Gums and Slices
1 lb.

(Purchased in The May Store, Cleveland, Ohio.)

Appearance of Package: Good.

Box: Folding box, printed in pu

Box: Folding box, printed in purple and black.

Assorted Slices: Colors: Good. Texture: Good Sugaring: Good. Flavors: Fair.

Assorted Gums: Colors: Good. Texture: Good Sugaring: Good.

Favors: Fair.

Remarks: Good eating gum pieces.

Suggest some of the flavors be im-

proved.

Code 6B4
Assorted Crystallized Gums
and Slices
1 lb.

(Purchased in Cleveland, Ohio.)

Appearance of Package: Good.

Box: One layer type, top printed in

pink and green. Cellulose wrapper. Name in white and green.

Appearance of Box on Opening: Good.

Colors: Good.
Texture: Good.
Sugaring: Good.
Flavors: Good.
Assorted Gums:

Colors: Good.
Crystal: Good.
Texture: Good
Flavors: Good.
Sugared Pieces: Good.

Remarks: The best assorted gums and slices we have examined this year.

Code 6C4 Chocolate Fudge 1½ ozs., 5c

(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Good.

Wrapper: Cellulose wrapper printed in red, white and blue. 6 pieces of fudge wrapped in printed cellulose.

Fudge: Color: Good.

Texture: Tough and dry.

Taste: Fair.

Remarks: Not a good eating fudge.

Fudge

Lacked a good chocolate flavor.

C

Sı

as

(Pu

App

Con to Piec M

Ren m ye ty

(

App

Con

Jell

F

P

F

fl:

App

Con

TI

for

Rer

be

Ren

Code 6D4 Chocolate Nut Fudge 1 lb., 89c

(Purchased in a retail candy shop, Los Angeles, Calif.)

Container: See remarks.

Fudge: Color: Fair. Texture: Good Taste: Fair.

Remarks: Suggest fudge be wrapped in moisture proof cellulose. Fudge lacked a good chocolate taste. Suggest a good chocolate liquor be used, enough to give fudge a good color and to improve the flavor.

Code 6E4
Light Chocolate Coated
Chocolate Paste Squares
8½ ozs., \$1.00

(Purchased in a retail sandy store, Los Angeles, Calif.)

Appearance of Package: Good.

Box: One layer type, extension edge top and bottom, long oblong shape, white paper top printed pink lines,

name printed in black. Coating: Light: Good.

Center: Color: Good. Texture: Good

Mint Flavor: Good.

Remarks: A good eating piece. Highly priced at 8½ ozs. for one dollar.

Code 6F4 Nut Roll

1 oz., 5c (Purchased in a chain dry goods store,

Chicago, Ill.)
Appearance of Bar: Good.

Size: Good.

Wrapper: Amber cellulose wrapper printed in red and white.

Bar:

Peanuts: Good. Caramel: Good.

Candy Clinic Schedule For the Year

JANUARY—Holiday Packages; Hard Candies

FEBRUARY-Chewy Candies; Caramels; Brittles

MARCH—One-Pound Boxes Assorted Chocolates up to \$1.00

APRIL—\$1.00 and up Chocolates; Solid Chocolate Bars MAY—Easter Candies and Packages; Moulded Goods

JUNE-Marshmallows; Fudge

JULY—Gums; Jellies; Undipped Bars

AUGUST—Summer Candies and Packages SEPTEMBER—Bar Goods; 5c Numbers

OCTOBER-Salted Nuts; 10c-15c-25c Packages

NOVEMBER—Cordial Cherries; Panned Goods; 1c Pieces DECEMBER—Best Packages and Items of Each Type Con-

sidered During Year; Special Packages; New Packages

Center: Good.

Remarks: A very good eating nut roll, the best we have examined this year. Suggest manufacturer check his cost as we doubt if there is a living profit in it at 5c retail.

Code 6G4 Hollow Milk Chocolate Molded Doll

1 oz., 10c

(Purchased in a chain dry goods store. Appearance of Piece: Good.

Container: Cellulose bag, paper clip on top printed in lavender and yellow.

Piece: Molding: Good. Gloss: Good.

Taste: Good.
Remarks: The best 10c milk chocolate
molded piece we have examined this
year. Very good chocolate for this
type of confection.

Code 6H4 Jelly Beans 1 lb.

(Purchased in The May Co. Store, Cleveland, Ohio.)

Appearance of Package: Good, for jelly beans.

Container: Folding box printed in purple and black.

Jelly Beans: Colors: Good. Finish: Good. Panning: Good. Flavors: Fair.

Remarks: A well made jelly bean.
Good eating. Suggest some of the
flavors be improved.

Code 6L4 Marshmallows 10 oz., 19c

(Purchased in a grocery store,

Oak Park, Ill.)
Appearance of Package: Good.

Container: Cellulose bag printed in red, white and blue.

Marshmallows: Color: Fair.

Texture: Tough. Taste: Fair.

Remarks: Suggest marshmallow formula be checked as marshmallows are not up to standard. They also had an "off" color. A marshmallow of this type should have a white color.

Code 6I4 Marshmallows

1 lb. 35c

(Purchased in a grocery store, Oak Park, Ill.)

Appearance of Package: Good.

Box: Folding box, inside wrapper of wax paper. Outside white paper wrapper printed in red and blue.

Box contained 4 four ounce packages with printed wax wrappers.

Marshmallows: Color: Good. Texture: Tough. Taste: Fair.

Remarks: We have examined these marshmallows a number of times and always found them to be very good. The marshmallows in this package were tough and dry. Suggest formula be checked.

Code 6J4 Caramel Marshmallows 6 ozs., 25c

(Purchased in a chain dry goods store, Chicago, Ill.)

Sold in Bulk: Piece is a vanilla caramel and marshmallow. Printed wax wrappers.

Piece:

Color: Good. Caramel: Good.

Marshmallow: Too tough and lacked

flavor.

Remarks: Suggest marshmallow formula be checked as marshmallow is not good eating.

Code 6K4 Toasted Marshmallows

1 lb., 19c (Purchased in a dry goods store, Chicago, Ill.)

Appearance of Package: Good.
Container: Polyethylene bag, paper clip on top printed in yellow and red.

Marshmallows:
Toasted Coconut: Good.
Marshmallow: Good.

Taste: Good.

Remarks: The best toasted marshmallow at this price we have examined this year.

NULOMOLINE CAN HELP YOU "PRODUCTIONWISE"

Are you planning to produce new pieces?

Are your current formulas in balance?

Do your candies prematurely grain? dry, ferment, or mold?

Can your process be simplified, and your costs lowered?

Can you improve quality and maintain uniformity?

"SPECIAL CENTERS FOR SPECIAL COATINGS"

If you have not already done so . . . write us for copies of these newly developed formulas.



Visit Booth No. 210 . . . see special candy centers enrobed with special coatings.

Confectionery Industries Exposition Conrad Hilton Hotel, Chicago June 7-10, inclusive

USE NULOMOLINE, THE PIONEER STANDARDIZED INVERT SUGAR . . . used by condy makers for over 30 years!

Avoid transportation delays—order your supplies now!

THE NULOMOLINE DIVISION

AMERICAN MOLASSES COMPANY

Manufacturers of Nulomoline® (Standardized Invert Sugar) and Syrups
120 WALL STREET, NEW YORK 5, N. Y.

330 East N. Water St., Chicago 11, Ill. 751 Terminal St., Los Angeles 21, Calif. NULOMOLINE, LIMITED: 1410 Stanley St., Montreal 2, Canada

WALTER H. KANSTEINER CO.

RAW MATERIAL BROKERS

1737 Howard St.

Chicago 26

Chocolate—Bachman Chocolate Manufacturing Co.

Pecans and Black Walnuts-R. E. Funsten Co.

Oils-The Blanton Co.

Jun

Jun

Jun Jun

Jun

Jur

Jui

Ju

Ju

Ju

Walter H. Kansteiner, Walter H. Kansteiner, Jr., E. T. Rennicke

The confidence of the Purchaser in the integrity of the Seller-our greatest asset

TRUTASTE /

KASKA CONCENTRATED
CITRUS OILS

ANN, BUSLEE & WOLFE, INC.

EST HIGHWAY

CHICAGO 31, ILLINOIS



is extended to you by

D. P. O'CONNOR

O. H. TOUSEY

L. S. POER

F. J. McCROSSON

ARTHUR BROOKS

DUKE VANCE

H. A. HORAN

P. G. WEAR

J. A. KOOREMAN

W. J. BROWN

DON CAHOON

O. W. JOHNSON

to visit our booth No. 2

at the

National Confectionery Industries Exposition

Hotel Conrad Hilton, Chicago, Illinois

June 6-10



PENICK & FORD LING

- Jactory ... CEDAR RAPIDS, IOWA

Meetings Conventions

June 6-10-National Confectioners Association Convention and Exposition, Conrad Hilton Hotel, Chicago, Illinois.

June 6-9-Associated Retailer Confectioners' annual Convention and Exposition, Drake Hotel, Chicago, Illinois.

June 7-Retail Confectioners of Philadelphia monthly meeting. June 8 and 22-Semi-monthly meetings of the Detroit Tobacco & Candy Round Table Club.

June 10-American Association of Candy Technologists, New York Section, monthly meeting.

June 10-Confectionery Salesmen's Club of Baltimore will have their stag outing at Conrad's Ruth Villa, Bengies, Maryland.

June 10-Metropolitan Candy Brokers Association, Inc., monthly meeting, Hotel Empire, New York City.

June 11-Chicago Candy Club Golf Outing, River Forest Country Club.

June 11-Carolina Confectionery Salesmen's Club monthly meeting at Kuester's, Charlotte, North Carolina.

June 11-The Denver Association of Manufacturers Representatives annual Stage party at Park Hill Country Club in Denver.

June 12-Los Angeles Confectionery Sales Club, Inc., annual picnic at the Ehrenclou Estate, San Marino, California.

June 14-16-National Confectionery Salesmen's Assoc. convention, Kiamesha Lake, N. Y.

June 16-Buffalo and Western New York Confectioners Association, monthly meeting.

June 17-New York Candy Club, Inc., monthly meeting, Park Sheraton Hotel.

June 18-The Denver Association of Manufacturers Representatives monthly meeting.

June 18-Golden West Candy Club monthly meeting.

June 18-Great Plains Candy Club monthly meeting, Castle Hotel, Omaha, lunch 12:30.

June 21-23-American Management Association General Management Conference, Hotel Statler, New York City.

June 21-Confectionery Salesmen's Club of Philadelphia monthly meeting.

June 21-23-Southern Salesmen Candy Club, 1954 annual meeting, George Washington Hotel, Jacksonville, Florida. June 22-The Candy Executives and Associated Industries

Club will have their regular monthly meeting. June 23-Southern California Association of Tobacco Distributors, Inc., monthly meeting, Chapman Park Hotel, 6th & Alexandria Sts., Los Angeles.

June 22-25-Southern Wholesale Confectioners Association, Inc., 1954 Convention and Candy Show.

June 24-27-Boston Confectionery Salesmen's Club, Inc., 25th Anniversary at Wentworth-By-The-Sea, Portsmouth, New Hampshire.

June 25-Badger Candy Club monthly meeting at the Astor Hotel, 924 East Juneau, Milwaukee, Wisconsin, at 8:00 p.m. June 25-27-The Candy Production Club of Chicago will celebrate their 25th anniversary on the Clinton Foods, Inc.,

Houseboat at Clinton. June 26-Dallas Candy Club monthly meeting at the Semos Restaurant, 505 Forth Worth Avenue, Dallas, Texas.

June 26-Gopher Candy Club monthly meeting at the Covered Wagon, Minneapolis, Minnesota.

June 29-Candy Square Club monthly meeting at Riverside Plaza Hotel, 253 West 73rd St., New York City.

June 30-Buffalo and Western New York Confectioners Association will, have their Stag Outing at the East Aurora Fish & Game Club.

July 3—Northwest Candy Club, monthly meeting, The Grove Caff, 500 Wall Street, Seattle, Washington.

July 6-9-National Confectionery Salesmen's Association annual

July 8-10-Pennsylvania Manufacturing Confectioners' Association, 43rd. Annual meeting, Galen Hall Country Club, Wernersville, Pennsylvania.

July 28-Empire State Candy Club annual Clam Bake, Hinerwadel's Grove, North Syracuse, New York-8 p.m.

August 1-5—National Candy Wholesalers Association, Inc., Convention and Exposition, Commodore Hotel, New York

Sept. 23-26-Packaging Machinery Manufacturers Institute annual meeting, Grove Park Inn, Asheville, North Carolina.

Sept. 28-30-National Industrial Packaging & Materials Handling Exposition, Chicago, Illinois.

October 1-3-Indiana Tobacco & Candy Association, annual convention, Indianapolis, Indiana.

October 10-13-National Automatic Merchandising Association, 1954 Convention and Exhibit, Washington, D. C.

Welcome to the N.C. A. Convention

Conrad Hilton Hotel Visit us at Booth 510

AMERICAN CHOCOLATE MOULD CO.. INC.

173 Lafayette Street . New York City Successors to Eppelsbeimer & Co.-Warren Bros. Co.



Quality Coconut For Confectioners Since 1935

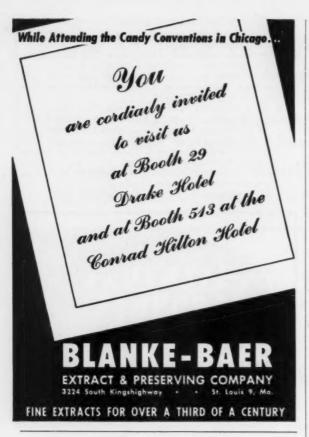
Warehouse stocks conveniently located

SUN-RIPE COCOANUT CORP.

79 Wall Street

New York 5, N. Y.

ER



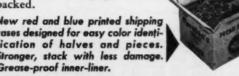


For over 55 years Funsten has made available only the highest quality Pecans and Eastern Black Wal-

nuts. Now, for your added protection, all Funsten nut meats are Funstenized-a new process (not heat treated) for destroying harmful bacteria and assuring year 'round natural flavor.

After nut meats are "Funsten-ized," incubation tests show insect life all negative, bacteria, yeast and mold negligible when packed.

New red and blue printed shipping cases designed for easy color identification of halves and pieces. Stronger, stack with less damage. Grease-proof inner-liner.



For prices and terms, see your local Funsten broker or write:

R. E. FUNSTEN Company, 1515 Delmar, St. Louis 3, Ma. Highest Quality for Over 55 Years

Confectionery Brokers

Middle Atlantic States

HERBERT M. SMITH

318 Palmer Drive NO. SYRACUSE, NEW YORK Terr.: New York State

South Atlantic States

BUSKELL BROKERAGE CO.

1135 East Front Street RICHLANDS, VA.

Contact Wholesale Groceries, Candy Jobbers and National Chains Terr.: Va., W. Va., Eastern Tenn., and Eastern Kentucky

JIM CHAMBERS

Candy Broker 84 Peachtree Street

ATLANTA, GEORGIA Terr.: Ga., Ala., and Fla.

WM. E. HARRELSON

Candy & Allied Lines 5308 Tuckahoe Ave.—Phone 44280 RICHMOND 21, VIRGINIA Terr.: W. Va., N. & S. Car.

ROY E. RANDALL CO.

Manufacturers' Representative P. O. Box 605—Phone 7590

COLUMBIA 1, SO. CAROLINA Terr.: No. & So. Carolina Over 25 years in area

SAMUEL SMITH

2500 Patterson Ave. Phone 22318 Manufacturers' Representative WINSTON-SALEM 4, N. CAR. Terr.: Virginia, N. Carolina, S. Carolina

East No. Central States

BERNARD B. HIRSCH

4442 N. Woodburn St. MILWAUKEE 11, WISCONSIN err.: Wis., Ia., Ill. (excluding Chi-cago), Mich. (Upper Penn.)

H. K. BEALL & CO. 308 W. Washington St. CHICAGO 6, ILLINOIS Phone STate 2-6280 Territory: Illinois, Indiana, 25 years in the Candy Business

West So. Central States

JAMES A. WEAR & SON

P. O. Box 27 BALLINGER, TEXAS Territory: Texas

Mountain States

JERRY HIRSCH

Manufacturers' Representative Candy and Specialty Items 4111 E. 4th St.

TUCSON, ARIZONA

Territory: Arizona, New Mexico & El Paso, Texas

G & Z BROKERAGE COMPANY

New Mexico—Arizona El Paso County Texas

20

Si

W

26

FIV

tion ing

CO

1 M

mo

Six

nev

Fra

and

Ple 614

FE

US

dip

coo

ona

2 1

ket

ton

CO

40"

Als

RO

P. O. Box 227 ALBUQUERQUE N. Mex.

Personal service to 183 jobbers, super-markets and department stores. Backed by 26 years ex-perience in the confectionery field. We call on every account person-ally every six weeks. Candy is our business

KAISER MICHAEL

Broker

Manufacturers' Representative "World's Finest Candies" 911 Richmond Drive, S. E. ALBUQUERQUE, NEW MEXICO Terr.: New Mexico, Arizona & El Paso, Texas area

Pacific States

MALCOLM S. CLARK CO.

1487 Valencia St., SAN FRANCISCO 10, CALIF. 953 E. Third St., LOS ANGELES 13, CALIF. 1726 W. 60th St., SEATTLE 1, WASH. 3014 N.E. 32nd Ave., PORTLAND, ORE. Terr.: 11 W. States & Hawaii

LIBERMAN SALES COMPANY

1705 Belmont Avenue SEATTLE 22. WASHINGTON Cliff Liberman I. Liberman Terr.: Wash., Ore., Mont., Ida., Utah

HARRY N. NELSON CO. 112 Market St.

SAN FRANCISCO 11, CALIF. Established 1906

Sell Wholesale Trade Only Terr.: Eleven Western States

RALPH W. UNGER & RICHARD H. BROWN

923 East 3rd St. Phone: Mu. 4495 LOS ANGELES 13, CALIFORNIA Terr.: Calif., Ariz., N. Mex.,

West Texas & Nevada



MACHINERY FOR SALE

FOR SALE

Model S #3 Savage Fire Mixers. Model K #3 Savage Fire Mixers. 50 gal. Model F-6 Savage Tilting Mixers. 200 lb. Savage Flat Top Marshmal-

low Beaters.
Merrow Cut-Rol Cream Center

Maker. 50" two cylinder Werner Cream

E

co

CO.

).

ITA

VER

Beater. 1000 lb. Warner Syrup Cooler. 200 lb. to 2000 lb. Chocolate

Melters Meiters.
Simplex Gas Vacuum Cooker.
Simplex Steam Vacuum Cooker.
600 lb. Continuous Vacuum Cooker.
Form 6 and Form 3 Hildreth Pullers.
6' and 7' York Batch Rollers.
National Model AB Mogul with late type depositor.

We guarantee completely rebuilt.

SAVAGE BROS. CO. 2636 Gladys Ave. Chicago 12, Ill.

FIVE FOOT BALL-BEATER horse power motor. 50 gallon National Equipment—Double Action Tilting Kettle with five horse power motor. Box 636, The MANUFACTURING CONFECTIONER.

MILL RIVER all steel Mogul in use practically 2 years complete with Mill River depositor and pump bar; 1 National Equipment wood Mogul, old model, but runs plenty good; 10,000 starch trays to fit either machine; 1 Six-bag Peanut Roaster practically new; 1 Ideal Carmel Wrapper; 2 Drop Frames, 4 x 7 with one set of rollers; and many other items of small tools. Please write for full information Box 614, The MANUFACTURING CONFECTIONER. FECTIONER.

USED CANDY EQUIPMENT including Triumph Handy Depositor 3-400 lb. Choc. Melters, Cream beater, Electipping tables, Caramel cutters, Water cooled Steel slabs, etc. Will sell everything as a unit or by piece very reasonable. BETSY ROSS CANDY CO., 3840 No. Illinois, Indianapolis, Indiana, Phone HU. 5672.

2 RCA METAL DETECTORS, model MD; Simplex Gas Fire Cooker with 2 kettles; 24" Enrober line, Tunnel, Bottomer, refrigerated slab; Instant Fondant Machine; 120-qt. Glenn Beater. Box 1132, The MANUFACTURING CONFECTIONER.

46" ENROBER LINE. 80' Economy Tunnel, 180° turn, 40' packing table. Also 32" Enrober line, 65' Economy Tunnel, 20' packing table; Bar wrappers—2 Lynch with roll-card feed, 2 DF's for nut rolls, 2 Campbell bar wrappers; Nut Roll Machine with Caramel Coater. Box 1133, The MANUFACTURING CONFECTIONER.

ROSE "500" TWIST WRAP MACHINE cylinder piece; Hohberger Continuous Cream Machine. Box 344. The MANUFACTURING CONFECTIONER.

50 GALLON NICKEL STEAM JACK-ETED KETTLE pure nickel inside jacket and outer jacket 90# pressure. Reasonable—set up, but never been used. Box 541 The MANUFACTUR-ING. CONFECTIONER ING CONFECTIONER.

SIMPLEX GAS VACUUM COOKER complete with spare pump, gaskets, and glasses, 3 kettles (extra deep and with special handles). Two Hydraulic Dollies for one man operation of above units. In excellent used condition SEVIGNY'S CANDY, INC., West Hanover, Massachusetts. Phone: ROckland 1969.

WOOD MOGUL with stainless steel hopper and two Hydramatic pumps. Now in operation and in good running order. The nature of our business is changing so that depositing is no longer necessary. We need the room so will sell cheap to get it out. UCANCO CANDY CO., DAVENPORT, IOWA.

FOR SALE: Used Candy Equipment:
Beaters, Kettles, Stoves, Cooling
Slabs, Wrapping Machines, Starch
Molding Equipment, Enrobers, Chocolate Melters, Starch Boards, etc. S. Z.
CANDY MACHINERY CO., 1140 N.
AMERICAN ST., PHILA. 23, PENNA.

SIMPLEX STEAM VACUUM COOKER with high dome. Box 424, The MANUFACTURING CONFECTIONER.

FOR SALE: Complete Marshmallow mfg. equipment. Box 145, The MAN-UFACTURING CONFECTIONER.

WE BUY & SELL

ODD LOTS . OVER RUNS . SURPLUS



SHEETS-ROLLS-SHREDDINGS opkane rolls in cutter boxes 100 ft. or more ALSO MADE OF OTHER CELLULOSE FILM

Wax - Glassine Bags, Sheets & Rolls

Tying Ribbons—All Colors & Widths Scotch Tape Clear & Colors

Diamond "Cellophane" Products Harry L. Diamond

"At Your Service" 74 E. 28th St., Chicago 16, Illinois

CLASSIFIED ADVERTIS-ING is designed to aid the candy man in finding a market for or source of used equipment, serv-ices and miscellaneous items. In replying to ads address: Box Number, The Manufacturing Confectioner, 418 N. Austin Blvd., Oak Park, Illinois.

Minimum insertion is 3 lines, at 35c per line, 70c for bold face; not subject to agency discounts.

HELP WANTED

SPINNER-EXPERIENCED on Racine Lollipop machine. Plant in New York City. State qualifications. Box 644, The MANUFACTURING CON-FECTIONER.

OPPORTUNITY FOR FAIRLY
YOUNG MAN with education and
experience as Candy maker. Position
mainly concerned with quality control
and experimenting. Splendid future for
right man. Plant located in Georgia.
BOX 434. The MANUFACTURING
CONFECTIONER.

REPRESENTATIVE WANTED to handle line of starch trays on com-mission basis. Box 243, The MANU-FACTURING CONFECTIONER.

POSITIONS WANTED

CANDY EXECUTIVE: Plant manager of leading candy manufacturer for several years. Experienced in all plant operations plus purchasing, production and distribution. Proven ability to as-sume full responsibility of plant opera-tions. Box 542. The MANUFACTUR-ING CONFECTIONER.

FRANK PETROVIC Consultant

Censultant

I have had over 50 years experience in candy factories of all sizes, in the development of new candies, both low priced for the wholesale trade and high priced for the retail trade. I have helped engineer special equipment for the manufacturing of unusual candies, and in placing equipment for maximum efficiency. I have also had a great deal of experience with all types of chocolate and summer coatings, and can help in setting up a coating handling and tempering system. I will travel to any place where my experience can be of service.

5955 W. Dakin St., Chicago 34, Illinois, Telephone, Spring 7-2961

CANDY EXECUTIVE: Plant manager of leading candy manufacturer for several years. Experienced in all plant operations plus purchasing, production and distribution. Proven ability to assume full responsibility of plant operations. Box 542. The MANUFACTURING CONFECTIONER.

FIRST CLASS PAN MAN creative and initiative ability, supervisory background, 35 years practical experience in all phases of pan work, also Ball and Tablet Chewing Gum. Capable for any size Pan Department. A. CALABRESE, 3215 GABRIEL AVE., ZION,

FOREMAN IN GENERAL PAN LINE including Bubble Chewing gum bass and regular gum bass, looking for better position. I will also teach how to make gum bass in the United States and also foreign countries. Box 938, The MANUFACTURING CONFECTIONIES.

INDEX TO ADVERTISERS

In The MANUFACTURING CONFECTIONER

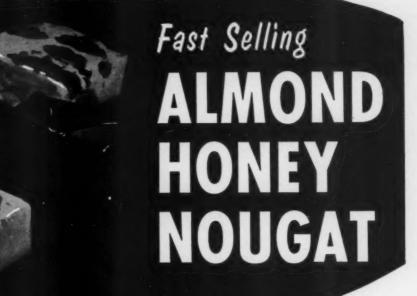
Advertisements of suppliers are a vital part of the industrial publication's service to its readers. The following firms are serving the readers of The MANUFACTURING CONFECTIONER by placing their advertisements on its pages. The messages of these suppliers are certainly a part of the literature of the industry.

Advertising space in The MANUFACTURING CONFECTIONER is available only to firms supplying equipment, materials, and services for the use of confectionery manufacturers. Advertising of finished confectionery products is not accepted.

* * * * RAW MATERIALS

Ambrosia Chocolate Company 86	Florasynth Laboratories 77	The Nulomoline Div. American Molasses Co
American Food Laboratories,	Food Materials Corp 92	
Inc 2	Franklin Baker Division, General	Penick & Ford, Ltd., Inc 9
American Maize-Products Co 79	Foods Corp May '54	Pfizer, Chas., & Co., Inc
American Sugar Refining Co 21	Fritzsche Brothers, Inc 4	
Anheuser-Busch, Inc May '54	R. E. Funsten Company 98	Refined Syrups & Sugars, Inc.
The Best Foods Co 75	Givaudan Flavors, Inc 80	***************************************
Walter Baker Chocolate and Cocoa		Southern Pecan Shelling Co. Nov. '5
Div. of General Foods Corp14, 15	Hooton Chocolate Co 78	Speas Company 8
Blanke-Baer Extract and	Hubinger Co., The 24	Staley, A. E., Mfg. Company . May '5
Preserving Co 98	Walter H. Kansteiner Company 96	Stange, Wm. J., Co 8
Burke Products Co	Kohnstamm, H., & Company, Inc. 9	Sunkist Growers 2
W. J. Busch & Co 78	W 1 01 1 0 T 1	Sunripe Cocoanut Co 9
California Almond Growers	Merckens Chocolate Company, Inc. 81	
Exchange101	National Aniline Division, Allied	Union Starch & Refining Co
Clinton Foods, Inc 88	Chemical & Dye Corpora-	Co May 5
Dodge & Olcott, Inc 26	tion 19	Van Ameringen-Haebler, Inc 1
Durkee Famous Foods 17	Nestle Company, Inc., The 70	,
	Neumann, Buslee & Wolfe, Inc 96	White Stokes Company6,
Felton Chemical Company,	Norda Essential Oil and Chemical	Wilbur-Suchard Chocolate
Inc 18	Company, Inc 4th Cover	Company, Inc
PROPE	CTION MACHINERY AND POSITION	DARFIN
PRODU	CTION MACHINERY AND EQUI	PMENT
American Chocolate Mould 97	Greer, J. W., Company 20	Racine Confectioners' Machinery
Blackmer Pump Co May '54	Groen Mfg. Co May '54	Racine Confectioners' Machinery
Bramigk & Co., Ltd May '54		Savage Bros. Co 8
Burrell Belting Co May '54	Hamilton Copper and Brass Works	Schultz-O'Neill Co May '5
	WorksMay'54	Sheffman, John, Inc
Fred S. Carver Inc 23		Standard Casing Co., Inc., The 8
Cincinnati Aluminum Mould Co	Lehmann, J. M., Company,	Stehling, Chas. H., Co
Co May '54	Inc May '54	Thornton-Carlson 9
Corrigan, J. C., Inc 86	MIL D. D. 10	1 normton-Carison
William C 35 11 0 35 151	Mill River Tool Co May '54	Vacuum Candy Machinery Co 2
Electric Sorting Machine Co May '54	W DI G W W	Voss Belting & Specialty Co
Geveke and Co., Inc11, 12, 13	Niagara Blower Company May '54	CoMay '5
PACE	AGING SUPPLIES AND EQUIPM	IENT
Champion Bag Company 42	Heekin Can Co., The 65	Package Machinery Co 4
Cooper Paper Box Corporation 64	Hudson-Sharp Machine Co 46	Peters Machinery Co May '5
Crystal Tube Corp 66	Ideal Warrier Washing Communication	Plax Corporation 6
Daniela Manufacturina Co	Ideal Wrapping Machine Company 93	Rhinelander Paper Company 6
Daniels Manufacturing Co 51	The Industrial Marking Equipment	Riegel Paper Corporation 3
Diamond "Cellophane" Products 99	Co 66	
Dixie Wax Paper Co 59	Kiwi Coders Corp 46	Stokes & Smith Co 5
Dow Chemical Co., The 39		Sweetnam, George H., Co 6
Exact Weight Scale Company	Lynch Corporation, Packaging Machine Division	Taft, R. C., Co 4
Company May '54	machine Division 70	Thilmany Pulp & Paper Co 4
The Pewer Comment	Milprint, Inc 45	Triangle Packaging Machinery Co
The Foxon Company 69		
N. T. Gates Company 66	Olive Can Company54, 55	Visking Corporation48, 4

Try this tested formula for . . .





Here's formula

PART 1

. 95 . 96

. 3 r. '53 . 82 y '54 . 87 . 22 . 97

y '54

. 10

. 6, 7 1 '54

. 25

y '54

6, 90 . 87

. 74

. 93

. 25

y '54

. 40

y '54 . 69

· 64

. 53

. 67

. 44 . 43 . 44 3, 49

NER

(whipped partien)

10 lbs. honey

en dissolved in 34 lb. ogg alb 1½ pts. water

Place dissolved albumen into an upright beater, add honey (cool) and beat until light, then prepare-

PART 2

15 lbs. com syrup

5 lbs. honey 15 lbs. granulated sugar

1/a lb. salt 11/2 lbs. coconut oil (86° M.P.)

7 lbs. reasted Mission sheller almends, chopped or whole

1 tsp. orange oil

Heat corn syrup, honey, sugar and water to boiling point and cook to 280-285°F. (sea level), then pour into whipped portion, mixing rapidly. Add salt, orange oil, roasted almonds and coconut oil cut in small pieces. Mix to distribute coconut oil, then spread on oiled slab. When cool, cut into squares.

made with the candymakers' favorite...

BLUE DIAMOND ALMONDS

Everybody knows how people are inclined to reach for "the one with almonds," and this delicious Almond Nougat is no exception. The candy firm which made the test batch shown above says this is a popular seller in San Francisco candy stores.

Yes, Almond Honey Nougat is favored by candy-buyers like Blue Diamond Almonds are favored by the nation's leading candymakers. Only "Blue Diamonds" are "double sorted," by hand and by photo electric "eye". Their uniform quality and accurate sizegrading reduce handling costs in your candy plant. No dust, bitters, or foreign material! Controlled minimum moisture content! Write on your company letterhead for prices and samples, and for your free copy of "Formulas for Candymakers".

Blue

CALIFORNIA ALMOND GROWERS EXCHANGE

SACRAMENTO, CALIFORNIA Sales Offices: 100 Hudson St., New York 13, and 549 W. Randolph St., Chicago 6.

DIAMOND BRAND

Nation's Favorite Candies are ALMOND



When
Nature
Hasn't
Played Fair
with a
Grape

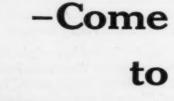
You sometimes have to give Nature a boost, for the sake of your own pocketbook. That's when Norda can be a big help.

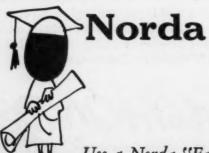
Here's how it works:

You use Norda genuine natural fruit Flavors, because they give your products real true-fruit taste. They're rich and wonderful.

Maybe, though, it's not profitable to use all natural fruit flavors. Then "piece them out" and supplement them with Norda imitation Flavors. They have the same fine characteristics. They're full-bodied, true to type, almost indistinguishable from the genuine. You can economize with them, without skimping on strength or quality.

Norda Grape Flavor will show you. Let us send you *free* samples of both genuine and imitation. Send your request today.





Use a Norda "Favorite to Flavor It"

Norda

Norda, Inc., 601 West 26th Street, New York 1, N. Y.



